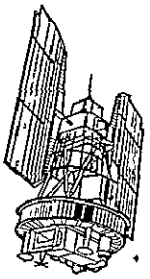
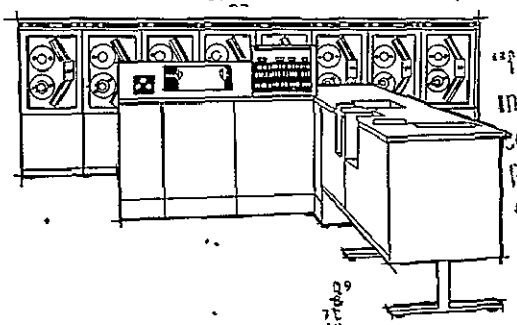
JSC 11378

DETECTION AND MAPPING PACKAGE





VOLUME 2b: SOFTWARE USER MANUAL (part 2)

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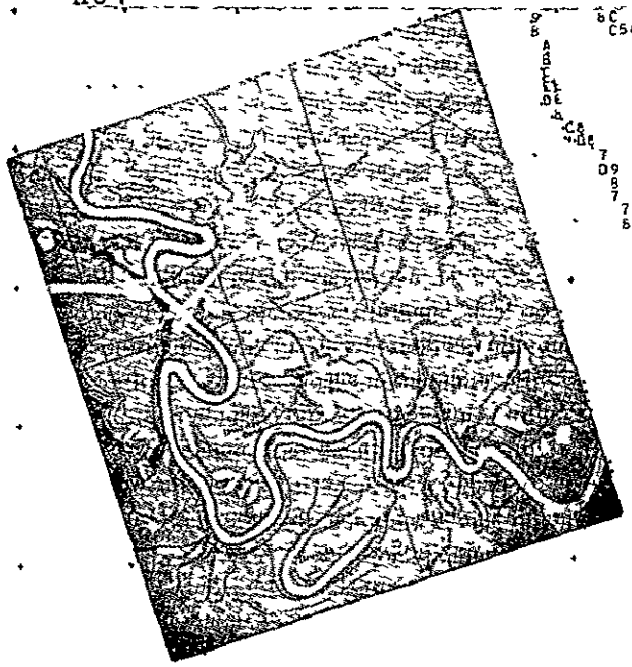

JUNE 1976

NASA
National Aeronautics and Space Administration

Lyndon B Johnson Space Center
Houston Texas 77058

JSC - 11378

DETECTION AND MAPPING PACKAGE

VOLUME 2b: SOFTWARE USER MANUAL (part 2)

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Software available from: COSMIC
University of Georgia
112 Barrow Hall
Athens, Georgia 30602

16 Abstract

The DAM package is an integrated set of manual procedures, computer programs, and graphic devices designed for efficient production of precisely registered and formatted maps from digital Landsat multispectral scanner (MSS) data. The software can be readily implemented on any Univac 1100 series computer with standard peripheral equipment. This version of the software includes pre-defined spectral limits for use in classifying and mapping surface water.

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Computer programs, Earth resources, Earth satellites, land use, Landsat satellites, mapping, remote sensors, surface water, thematic mapping	

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PREFACE

Multispectral scanners onboard NASA unmanned Landsat satellites provide an ideal source of current data for Earth resources applications. The Detection and Mapping (DAM) package was originally developed at the Johnson Space Center for rapid conversion of the Landsat digital data into hydrographic maps matching standard topographic quadrangle series Recent improvements in both the manual procedures and computer programs within the DAM package make it easier to use, faster, and more general purpose.

Documentation and software for the DAM package are available to all public and private agencies, in accordance with the NASA policy of encouraging maximum use of remote sensing technology.

Published documentation, of which this is volume 2b, is comprised of the following volumes:

Volume 1. General Procedure

Volume 2. Software User Manual (in two parts)

Volume 3. Control Network Establishment

These volumes supersede the previous documentation published in 1973. Software releases prior to version 7602 cannot be used with the current documentation.

DAM PACKAGE APPENDICES (VERSION 7605)

1 7602

DETECTION AND MAPPING PACKAGE

SYSTEM DESIGN

E H SCHLOSSER

PROGRAMMING

M L BROWN
W G EPPLER
W A HOLLEY
T R KELL
E H SCHLOSSER

FUNDING

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
LYNDON B JOHNSON SPACE CENTER
HOUSTON, TEXAS 77058

CONTRACTOR

LOCKHEED ELECTRONICS COMPANY
AEROSPACE SYSTEMS DIVISION
HOUSTON, TEXAS 77058

DAM PACKAGE APPENDICES (VERSION 7605)

DAM PACKAGE APPENDIX A: GENERAL DOCUMENTATION

(7605)

1 7602

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DAM PACKAGE

THE DETECTION AND MAPPING (DAM) PACKAGE IS A USER-ORIENTED SYSTEM DESIGNED TO PRODUCE ACCURATE MAPS FROM LANDSAT DIGITAL DATA AT LOWEST POSSIBLE COST COMPONENTS OF THE DAM PACKAGE ARE

- MANUAL PROCEDURES
- COMPUTER PROGRAMS
- SPECIAL GRAPHIC DEVICES

THE FIVE GENERAL STEPS INVOLVED IN PROCESSING A LANDSAT SCENE WITH THE DAM PACKAGE ARE

- ACQUIRE DATA (LANDSAT TAPES & BASE MAPS)
- ESTABLISH CONTROL NETWORK
- DETERMINE SPECTRAL LIMITS (OR USE PRE-DEFINED LIMITS)
- SPECIFY MAP CHARACTERISTICS (LOCATION, FORMAT, SCALE, ETC.)
- GENERATE MAPS

1 7602

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LANDSAT

ONBOARD EACH ORBITING LANDSAT IS A MULTI-SPECTRAL SCANNER (MSS) WHICH SCANS THE EARTH BELOW, MEASURING ITS SURFACE RADIANCE IN THE FOLLOWING WAVELENGTHS

MSS CHANNEL	SPECTRAL BAND	WAVELENGTH (MICROMETERS)	RADIANCE VALUES
1	4 (GREEN)	0 5-0 6	0-127
2	5 (RED)	0.6-0 7	0-127
3	6 (NEAR IR)	0.7-0 8	0-127
4	7 (NEAR IR)	0 8-1.1	0-63

DIGITAL MSS DATA FOR EACH 100 X 100 NAUTICAL MILE LANDSAT SCENE ARE DIVIDED INTO FOUR 25-MILE-WIDE STRIPS (NUMBERED 1 THRU 4 FROM LEFT TO RIGHT) THEY ARE RECORDED ON COMPUTER TAPE IN SEVERAL FORMS

1. SINGLE-FILE TAPES EACH REEL CONTAINS DATA FOR ONE STRIP IN A SINGLE FILE (4 REELS PER SCENE)

2. MULTI-FILE TAPES· EACH REEL CONTAINS DATA FOR TWO OR FOUR STRIPS IN SEPARATE FILES (1 OR 2 REELS PER SCENE, DEPENDING ON TAPE DENSITY).

1 7602

RULES

GENERAL

IN EXPLAINING COMPUTER INPUT, WE WILL ENCLOSE THE INPUT DESCRIPTION IN <POINTED> BRACKETS , AND OPTIONAL INPUT IN [SQUARE] BRACKETS DO NOT INCLUDE THESE EXPLANATORY CHARACTERS < > [ ] WHEN ACTUALLY SUBMITTING INPUT TO THE COMPUTER

WE WILL ENCLOSE ALTERNATIVE FORMS OF INPUT IN BRACES.

WE WILL ALSO USE A TRIPLE PERIOD (...) TO INDICATE THAT THE PREVIOUS ITEM(S) MAY BE REPEATED ANY NUMBER OF TIMES

EXEC COMMANDS

EXEC COMMAND STATEMENTS COMMUNICATE WITH THE EXECUTIVE. THEY.
- MUST START IN COLUMN 1 WITH THE CHARACTER @
- ARE TERMINATED BY:
  - END OF CARD, OR
  - CARRIAGE RETURN
- CANNOT BE ABBREVIATED
- CANNOT BE USED WITHIN PROGRAMS (EXCEPT @EOF & @ADD)

THE FORMAT FOR EXEC COMMAND STATEMENTS IS.

<EXEC COMMAND>[,<OPTIONS>] [<OPERAND>[, .]][. <COMMENT>]

COMMANDS

COMMAND STATEMENTS COMMUNICATE WITH A PROGRAM THEY:
- MAY START IN ANY COLUMN
- ARE TERMINATED BY
  - END OF CARD (UNLESS SPANNED), OR
  - CARRIAGE RETURN, OR
  - TRIPLE COMMA (,,,)
- MAY BE ABBREVIATED
- CAN ONLY BE USED WITHIN PROGRAMS

THE FORMAT FOR COMMAND STATEMENTS IS:

<COMMAND>[,<SPECIFICATION FIELD>[, ...]][,,<COMMENT>]

REMARKS

REMARK STATEMENTS ARE PRINTED, BUT OTHERWISE IGNORED THEY
- MUST START IN COLUMN 1 WITH THE CHARACTER *
- ARE TERMINATED BY
  - END OF CARD, OR
  - CARRIAGE RETURN
- CAN ONLY BE USED WITHIN PROGRAMS

THE FORMAT FOR REMARK STATEMENTS IS·

*<REMARKS TO BE PRINTED>

SPECIFICATION FIELDS

SPECIFICATION FIELDS PROVIDE INFORMATION NECESSARY TO PROCESS A COMMAND THEY
- MAY START IN ANY COLUMN
- ARE TERMINATED BY:
  - ONE OR MORE COMMAS, OR
  - END OF CARD, OR
  - CARRIAGE RETURN
- MAY BE ABBREVIATED
- CAN ONLY BE USED WITHIN COMMAND STATEMENTS

THE FORMAT FOR A SPECIFICATION FIELD IS

{<ALPHANUMERIC SPECIFICATION>}
{<NUMERIC SPECIFICATION>[<NOTE>]}

NUMERIC SPECIFICATIONS

THE FOLLOWING TYPES OF NUMERIC SPECIFICATIONS ARE ALLOWED:

1. DECIMAL -- NORMAL BASE 10 NOTATION, EITHER WITH OR WITHOUT THE DECIMAL POINT, AS APPROPRIATE

2. SEXAGENARY -- BASE 60 NOTATION, LEGAL ONLY FOR LATITUDE AND LONGITUDE.

THE FORMAT FOR SEXAGENARY NOTATION IS

{[<DEGREES>.]<MINUTES>[<SECONDS>]}
{[<DEGREES>/]<MINUTES>[/<SECONDS>]}

1 7602

FILES

1. DATA IS MAINTAINED ON TAPES AND DISK IN FILES

2. THE EXTERNAL OR SYSTEM NAME FOR A FILE IS FORMED AS FOLLOWS.
   [<QUALIFIER>*]<FILE>

3. IF NO QUALIFIER IS GIVEN, THE PROJECT SPECIFIED ON THE @RUN CARD IS USED AS QUALIFIER

4. A FILE NAME ALWAYS ENDS WITH A PERIOD.

5. SYMBOLIC ELEMENTS WITHIN A DISK FILE CONTAIN DATA IN CARD IMAGE FORMAT.

6. THE NAME FOR A SYMBOLIC ELEMENT IS FORMED AS FOLLOWS
   [<QUALIFIER>*]<FILE> <ELEMENT>

7. QUALIFIER, FILE, AND ELEMENT EACH MUST BE 12 CHARACTERS OR LESS CHOSEN FROM THE CHARACTER SET A TO Z, 0 TO 9, AND DASH (-)

1 7602

CARD CODES

FOR MOST KEYPUNCHES (IBM 026, 029, ETC) THE FOLLOWING CHARACTERS MAY NOT BE ENTERED DIRECTLY, EVEN IF PRESENT ON THE KEYBOARD, BUT MUST BE MULTI-PUNCHED INSTEAD

CHARACTER	MULTI-PUNCH	
@	87	
:	85	
'	84	
=	83	
&	82	
?	+0	(PLUS ZERO)
#	+87	
)	+84	
;	-86	
%	085	(ZERO EIGHT FIVE)
(	084	(ZERO EIGHT FOUR)

NOTES

1. THE CHARACTER PLUS IS A NUMERIC SHIFT P.

1 7602

COORDINATES

THE AREA OF A LANDSAT SCENE TO BE PROCESSED MAY BE DESCRIBED IN SCANNER COORDINATES, IN EARTH COORDINATES (GEOGRAPHIC OR UTM), OR IN MAP COORDINATES, AS SHOWN BELOW

TYPE	SYSTEM/UNITS	AXES	COMMANDS
SCANNER	SCAN	LINE,SAMPLE	ALIGN ORIGIN POINT TICK WINDOW
EARTH	DEGREES	NORTH,WEST	ALIGN ORIGIN POINT TICK WINDOW
	MINUTES	NORTH,WEST	TICK WINDOW
	KM	EAST,NORTH	ALIGN ORIGIN POINT TICK WINDOW
	METRES	EAST,NORTH	ALIGN ORIGIN POINT TICK WINDOW
MAP	PRINT	LINE,COLUMN	WINDOW
	CM	DOWN,RIGHT	WINDOW
	INCHES	DOWN,RIGHT	WINDOW

NOTES

1. SEE INDIVIDUAL COMMANDS FOR DETAILED INSTRUCTIONS.
2. UNIVERSAL TRANSVERSE MERCATOR (UTM) COORDINATES MAY BE EXPRESSED IN KM (KILOMETRES) OR METRES, PROVIDED THE ZONE NUMBER HAS BEEN PREVIOUSLY SPECIFIED
3. MAP COORDINATES MAY BE EXPRESSED IN PRINT LINE AND COLUMN, IN CM (CENTIMETRES), OR IN INCHES

1 7605

COMPUTER RUNS

THE RUNSTREAM FOR THE DAM PACKAGE ALWAYS HAS THE FOLLOWING FORM

```
@RUN[,<PRIORITY>/NR]  <RUNID>,<ACCOUNT>,<PROJECT>[,<MINUTES>,<PAGES>]
@USE DAM ,<EXTERNAL NAME OF DAM PROGRAM FILE>
@ASG,A DAM.
@ADD DAM SETUP
<DESIRED EXEC COMMANDS>
<DESIRED COMMANDS>
<DESIRED EXEC COMMANDS>
<DESIRED COMMANDS>
...
...
@FIN
```

NOTES:

1. <PRIORITY>, /NR, <MINUTES>, AND <PAGES> ARE REQUIRED FOR BATCH RUNS, BUT NOT FOR DEMAND TERMINAL RUNS
2. ANY NUMBER OF PROGRAMS MAY BE EXECUTED IN A SINGLE COMPUTER RUN (EXCEPT FOR ERTS-DUP)

1 7602

LOCAL STANDARDS

JSC EXTERNAL NAME OF DAM PROGRAM FILE

TF5-L76758*DAM.

JSC RUN PRIORITY (BATCH ONLY)

R DAYTIME 1
S DAYTIME 2
U OVERNIGHT 1
V OVERNIGHT 2
Z WEEKEND

JSC RUNID (BATCH & DEMAND)

<RUNID> :·= <2 LETTER USER INITIALS><3 CHARACTER BOX><1 CHARACTER>

JSC PROJECT (BATCH & DEMAND)

<PROJECT> ::= <JSC BRANCH>-<BADGE>
<BADGE> ::= <1 LETTER EMPLOYER CODE><5 DIGIT EMPLOYEE NUMBER>

JSC TAPE STAGING (DEMAND ONLY):

@JSC*CALLUP.TAPES <BADGE>*<RUNID>.[,<REEL>[/<SUBOPTION>][, ..]]

JSC TAPE ASSIGNMENT (BATCH & DEMAND)

@ASG,<OPTIONS>[/<SUBOPTION>] <FILE>,<EQUIP>,<REEL>[,<DAYS>,<TITLE>]

JSC TAPE SUBOPTION (BATCH & DEMAND)

F FOREIGN (READ OR WRITE)
T SCRATCH
S NEW SAVE
W WRITE ON OLD SAVE
(NO SUBOPTION MEANS READ OLD SAVE)

(7605)

DAM PACKAGE APPENDIX B: EXEC COMMAND DOCUMENTATION

1 7602

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DAM PACKAGE APPENDIX B· EXEC COMMAND DOCUMENTATION

1 7605

EXEC COMMANDS

@ADD <ELEMENT NAME>

@ASG,<OPTIONS> <FILE NAME>[,U9,<REEL NUMBER>]

@COPY,<OPTIONS> <INPUT FILE OR ELEMENT>,<OUTPUT FILE OR ELEMENT>

@ED,CPU <ELEMENT NAME>

@EOF

@FIN

@FREE[,S] <FILE NAME>

@LOCATE[,E] 3 ,<LANDSAT STRIP NUMBER>

@REWIND <FILE NAME>

@RUN[,<PRIORITY>/NR] <RUNID>,<ACCOUNT>,<PROJECT>[,<MINUTES>,<PAGES>]

@USE <INTERNAL FILE NAME>,<COMPLETE EXTERNAL FILE NAME>

@XQT[,E] <PROGRAM NAME>

1 7602

@ADD EXEC COMMAND

@ADD <ELEMENT NAME>

EXPLANATION

THIS EXEC COMMAND REQUESTS THAT SUBSEQUENT CARD IMAGE INPUT BE TAKEN FROM THE SPECIFIED SYMBOLIC ELEMENT AT THE END OF THE ELEMENT, INPUT WILL REVERT TO THE TERMINAL OR CARD READER

EXAMPLES

@ADD MYFILE.CONTROL

@ADD USERFILE.SPEC-LIMITS

RESTRICTIONS

1. THIS EXEC COMMAND MAY BE USED WITHIN A PROGRAM
2. THE DISK FILE CONTAINING THE SYMBOLIC ELEMENT SHOULD BE CURRENTLY ASSIGNED TO THE RUN

1 7605

@ASG EXEC COMMAND

```
@ASG, {BOTH[Z]  <FILE NAME>,U9,<REEL NUMBER>}
      {BOTV[Z]  <FILE NAME>,U9,<REEL NUMBER>}
      {A  <FILE NAME>                       }
      {CP  <FILE NAME>                      }
```

EXPLANATION

THE FIRST FORM OF THIS EXEC COMMAND ASSIGNS A TAPE FILE STORED ON THE SPECIFIED REEL AND REQUESTS THAT IT BE MOUNTED ON AN AVAILABLE 800 BPI 9 TRACK DRIVE THE Z OPTION IS ONLY USED FROM A TERMINAL

THE SECOND FORM OF THIS EXEC COMMAND ASSIGNS A TAPE FILE STORED ON THE SPECIFIED REEL AND REQUESTS THAT IT BE MOUNTED ON AN AVAILABLE 1600 BPI 9 TRACK DRIVE. THE Z OPTION IS ONLY USED FROM A TERMINAL

THE THIRD FORM ASSIGNS AN EXISTING DISK FILE

THE FOURTH FORM ASSIGNS A NEW DISK FILE.

EXAMPLES

```
@ASG,BOTH 3.,U9,X12345      ASSIGN FILE '3' (ON REEL X12345)

@ASG,A DAM.                 . ASSIGN FILE 'DAM' (STORED ON DISK)
```

RESTRICTIONS

1. THIS EXEC COMMAND MAY NOT BE USED WITHIN A PROGRAM.
2. REEL NUMBERS ARE LIMITED TO SIX CHARACTERS CHOSEN FROM THE LETTERS A-Z AND THE NUMBERS 0-9
3. SEE LOCAL STANDARDS FOR INFORMATION ON TAPE MANAGEMENT AND STAGING.
4. MOST DISK FILES (EXCEPT FOR THE DAM PROGRAM FILE) MAY ONLY BE ASSIGNED TO ONE RUN AT A TIME. TO AVOID UNNECESSARY CONFLICTS BETWEEN RUNS, USERS SHOULD @ASG,A SUCH FILES (EG. ONE CONTAINING A CONTROL NETWORK IN AN ELEMENT) JUST BEFORE THEY ARE NEEDED, AND @FREE THEM AS SOON AS POSSIBLE.

1 7602

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@COPY EXEC COMMAND

@COPY, {S} <INPUT FILE OR ELEMENT>,<OUTPUT FILE OR ELEMENT>
{A}

EXPLANATION

THIS EXEC COMMAND COPIES THE SPECIFIED FILE OR ELEMENT MEANING OF THE COPY OPTIONS IS AS FOLLOWS·

S	SYMBOLIC ELEMENTS (CONTROL NETWORKS, SPECTRAL LIMITS, ETC)
A	ABSOLUTE PROGRAM ELEMENTS

EXAMPLES

```
@COPY,S FILA.ELT1,FILB.ELT1    . COPY SYMBOLIC ELEMENT ELT1
                               .   FROM FILE FILA TO FILE FILB

@COPY,A DAM.,TPF$.             . COPY ALL ABSOLUTE PROGRAM
                               .   ELEMENTS FROM DAM. TO TPF$
```

RESTRICTIONS

1. THIS EXEC COMMAND MAY NOT BE USED WITHIN A PROGRAM.

2. ALL FILES INVOLVED SHOULD BE CURRENTLY ASSIGNED TO THE RUN.

1 7602

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@ED EXEC COMMAND

@ED,CPU <ELEMENT NAME>

EXPLANATION

THIS EXEC COMMAND INVOKES THE TEXT EDITOR, A SYSTEM PROCESSOR WHICH ALLOWS THE USER TO CREATE AND UPDATE SYMBOLIC ELEMENTS WITHIN A DISK FILE.

THE EDITOR OPERATES IN TWO MODES. INPUT AND EDIT. IN INPUT MODE, ALL LINES ENTERED ARE DIRECTLY INSERTED INTO THE TEXT IN EDIT MODE, VARIOUS EDIT COMMANDS MAY BE USED TO MODIFY EXISTING TEXT. MOST EDIT COMMANDS APPLY TO THE CURRENT LINE UNLESS THE NUMBER OF LINES (STARTING WITH THE CURRENT LINE) OR THE RANGE OF LINES IS SPECIFIED.

TO CHANGE MODE (INPUT TO EDIT OR EDIT TO INPUT) ENTER A BLANK LINE.

EDIT COMMANDS

C[HANGE] /<OLD STRING>/<NEW STRING>/[{<NO OF LINES> | <FROM LINE> <TO LINE> | ALL}]

D[ELETE] [{<NO OF LINES> | <FROM LINE> <TO LINE>}]

EXIT

I[NSERT] <TEXT OF NEW LINE TO BE INSERTED AFTER CURRENT LINE>

LNP (SEE PRINT -- IDENTICAL EXCEPT LINE NUMBERS ARE PRINTED)

L[OCATE] <STRING TO BE SEARCHED FOR IN SUBSEQUENT LINES>

OMIT (EXIT WITHOUT APPLYING THE CORRECTIONS MADE)

P[RINT][{<NUMBER OF LINES> | <FROM LINE> <TO LINE>}]

<LINE NUMBER TO POSITION EDITOR AT>

+<NUMBER OF LINES FORWARD TO POSITION EDITOR>

-<NUMBER OF LINES BACKWARD TO POSITION EDITOR>

1 7602

@EOF EXEC COMMAND

@EOF

EXPLANATION

THIS EXEC COMMAND SIGNALS AN END OF FILE ON INPUT FROM CARDS OR TERMINAL.

RESTRICTIONS

1. THIS EXEC COMMAND MAY BE USED WITHIN A PROGRAM
2. IF THIS EXEC COMMAND IMMEDIATELY FOLLOWS THE @XQT STATEMENT FOR A PROGRAM, THEN THE COMMANDS FROM THE PREVIOUS PROGRAM EXECUTION ARE RECALLED

1 7602

@FIN EXEC COMMAND

@FIN

EXPLANATION

THIS EXEC COMMAND TERMINATES A RUN

RESTRICTIONS

1. THIS EXEC COMMAND MAY NOT BE USED WITHIN A PROGRAM

1 7605

@FREE EXEC COMMAND

@FREE[,S] <FILE NAME>

EXPLANATION

THIS EXEC COMMAND FREES A FILE FOR FILES ON TAPE, THE REEL IS REMOVED FROM THE TAPE DRIVE; THE TAPE DRIVE IS THEN RELEASED TO OTHER USERS UNLESS THE S OPTION WAS SPECIFIED.

EXAMPLES

@FREE 3.

RESTRICTIONS

1. THIS EXEC COMMAND MAY NOT BE USED WITHIN A PROGRAM.
2. BOTH TAPE AND DISK FILES SHOULD BE @FREE-D AS SOON AS THEY ARE NO LONGER NEEDED FOR THE CURRENT RUN.

1 7602

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@LOCATE EXEC COMMAND

@LOCATE[,E] 3 ,<LANDSAT STRIP NUMBER>

EXPLANATION

THIS EXEC COMMAND SEARCHES A LANDSAT MSS MULTI-FILE DATA TAPE AND LOCATES THAT FILE CONTAINING DATA FOR THE SPECIFIED STRIP. THE E OPTION MEANS LOCATE THE STRIP IF AND ONLY IF THE LAST PROGRAM EXECUTION TERMINATED IN ERROR (NORMALLY USED BEFORE @XQT,E)

EXAMPLES

@LOCATE 3.,1 . LOCATE STRIP 1

@LOCATE,E 3.,3 . LOCATE STRIP 3 ON ERROR TERMINATION

RESTRICTIONS

1. THIS EXEC COMMAND MAY NOT BE USED WITHIN A PROGRAM
2. THIS EXEC COMMAND IS USED INSTEAD OF THE @REWIND EXEC COMMAND, WHEN PROCESSING A MULTI-FILE LANDSAT MSS TAPE.
3. THE LANDSAT MULTI-FILE DATA TAPE MUST BE ASSIGNED TO 3.
4. THE ONLY VALID STRIP NUMBERS ARE 1, 2, 3, AND 4.
5. FOR MAXIMUM EFFICIENCY STRIPS SHOULD BE ACCESSED IN ASCENDING ORDER

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aREWIND EXEC COMMAND

aREWIND <FILE NAME>

EXPLANATION

THIS EXEC COMMAND REWINDS THE SPECIFIED TAPE FILE TO THE LOADPOINT.

EXAMPLES

aREWIND 3.

RESTRICTIONS

1. THIS EXEC COMMAND MAY NOT BE USED WITHIN A PROGRAM

1 7602

@RUN EXEC COMMAND

```
@RUN[,<PRIORITY>/NR]  <RUNID>,<ACCOUNT>,<PROJECT>[,<MINUTES>,<PAGES>]
```

EXPLANATION

THIS EXEC COMMAND INITIATES A COMPUTER RUN THE OPTIONAL INFORMATION IS REQUIRED FOR A BATCH RUN, BUT NOT FOR A DEMAND TERMINAL RUN.

EXAMPLES

```
@RUN ABXYZ1,9999-AAA-P,TF5-N12345                . DEMAND TERMINAL

@RUN,U/NR ABXYZ1,9999-AAA-P,TF5-N12345,10,500    . BATCH
```

RESTRICTIONS

1. THIS EXEC COMMAND MAY NOT BE USED WITHIN A PROGRAM.
2. THE RUNID CANNOT EXCEED 6 ALPHANUMERIC CHARACTERS.
3. THE RUNID MUST BE UNIQUE.
4. SEE LOCAL STANDARDS FOR INFORMATION ON PRIORITY, RUNID, ACCOUNT, PROJECT.
5. THE @RUN STATEMENT MUST BE IMMEDIATELY FOLLOWED BY THESE THREE STATEMENTS:

```
@USE DAM.,<EXTERNAL NAME OF DAM PROGRAM FILE>
@ASG,A DAM
@ADD DAM SETUP
```

1 7602

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1 7602

@USE EXEC COMMAND

@USE <INTERNAL FILE NAME>,<COMPLETE EXTERNAL FILE NAME>

EXPLANATION

THIS EXEC COMMAND EQUATES A SHORT INTERNAL 'NICKNAME' WITH THE COMPLETE EXTERNAL NAME USED FOR A FILE BY THE OPERATING SYSTEM

EXAMPLES

@USE DAM.,TF5-L76758*DAM.

RESTRICTIONS

1. THIS EXEC COMMAND MAY NOT BE USED WITHIN A PROGRAM.

1 7602

@XQT EXEC COMMAND

@XQT[,E] <PROGRAM NAME>

EXPLANATION

THIS EXEC COMMAND INITIATES EXECUTION OF THE NAMED PROGRAM
THE E OPTION MEANS EXECUTE THE PROGRAM IF AND ONLY IF THE
PREVIOUS EXECUTION TERMINATED IN ERROR.

EXAMPLES

@XQT,E PICTAB

RESTRICTIONS

1. THIS EXEC COMMAND MAY NOT BE USED WITHIN A PROGRAM.

2. IF THE @XQT STATEMENT FOR A PROGRAM IS IMMEDIATELY FOLLOWED BY THE @EOF EXEC COMMAND, THEN COMMANDS FROM THE PREVIOUS PROGRAM EXECUTION ARE RECALLED.

1 7602

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DAM PACKAGE APPENDIX C: PROGRAM DOCUMENTATION

(7605)

PICOUT . REPLACED BY PICTAB
INTPIC . REPLACED BY PICTAB
COEF . REPLACED BY CONTROL
CTROL . REPLACED BY CONTROL

1 7602

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1 7602

PROGRAMS

THE DAM PACKAGE CURRENTLY CONTAINS 9 PROGRAMS FOR PROCESSING LANDSAT MSS DATA ON COMPUTER-COMPATIBLE TAPES: ,

PROGRAM	FUNCTION
ERTS-DUP	DUPLICATE COMPUTER-COMPATIBLE TAPE OF LANDSAT MSS DATA
ERTSIDC	PRINT SCENE IDENTIFICATION FOR LANDSAT MSS TAPE
PICTAB	PRODUCE DISPLAYS/TABULATIONS FROM RAW LANDSAT DATA
CONTROL	ADJUST/DIAGRAM CONTROL NETWORK USED TO REGISTER SCENE
CLASSIFY	GENERATE DENSITY FILE FROM RAW LANDSAT DATA
PRTDENS	DISPLAY PORTIONS OF DENSITY FILE(S)
PRTCLASS	PRODUCE LINE-PRINTER MAPS FROM DENSITY FILE(S)
PLTCLASS	PRODUCE PEN-PLOTTER MAPS FROM DENSITY FILE(S)
STATUS	MONITOR EXECUTION OF BATCH OR DEMAND RUNS

1 7605

ERTS-DUP PROGRAM

THIS EXEC COMMAND STREAM COPIES LANDSAT TAPE INN TO OUT, IGNORING FRAME COUNT ERRORS. IF UNRECOVERABLE PARITY ERRORS OCCUR IT REWINDS BOTH TAPES AND TRIES AGAIN. IF AND WHEN AN APPARENTLY SUCCESSFUL COPY IS MADE, THE COPY IS IDENTIFIED AND VERIFIED, AND THE RUN TERMINATED. THE RUNSTREAM BELOW SWAPS TAPE DRIVES AFTER 2 UNSUCCESSFUL ATTEMPTS, AND THEN TRIES TWICE AGAIN.

RUNSTREAM

```
@RUN[,<PRIORITY>/NR]  <RUNID>,<ACCOUNT>,<PROJECT>[,<MINUTES>,<PAGES>]

@USE DAM ,<EXTERNAL NAME OF PROGRAM FILE>

@ASG,A DAM.

@ADD DAM.SETUP

@ASG,BOTH  INN.,U9,<ORIGINAL REEL>

@ASG,BOTH  OUT.,U9,<BLANK REEL>

@ADD DAM.ERTS-DUP

@FREE,S OLDOUT.

@ASG,BOTH  INN.,U9,<ORIGINAL REEL>

@MSG SWAPPING TAPES

@FREE,S OLDINN.

@ASG,BOTH  OUT.,U9,<BLANK REEL>

@ADD DAM.ERTS-DUP

@FIN
```

NOTES

1. ERTS-DUP, UNLIKE OTHER PROGRAMS, MUST ALWAYS BE IN A SEPARATE RUN, AS SHOWN ABOVE.

1 7602

ERTSIDC PROGRAM

THIS PROGRAM PRINTS SCENE IDENTIFICATION INFORMATION FOR LANDSAT MSS DATA RECORDED ON A COMPUTER-COMPATIBLE TAPE.

RUNSTREAM

```
...

@ASG,BOTH[Z]  3.,U9,<REEL NUMBER>

@REWIND 3.

@XQT[,E]  ERTSIDC

 {@FREE 3.  }
 {@REWIND 3.}

...
```

1 7602

(THIS PAGE RESERVED FOR FUTURE USE)

1 7602

PICTAB PROGRAM

THIS PROGRAM PRODUCES DISPLAYS AND TABULATIONS FROM RAW LANDSAT MSS DATA RECORDED ON A COMPUTER-COMPATIBLE TAPE

RUNSTREAM

```
...

@ASG,BOTH[Z]  3 ,U9,<REEL NUMBER>

@REWIND 3.

@XQT[,E]  PICTAB
```

```
{ ALI[GN],SCA[N],<LINE>,<SAMPLE>,<EARTH COORDINATE SYSTEM>,
        <COORDINATE PAIR>
  CHA[NNEL][,<MSS CHANNEL NUMBER>[, ... ]]
  CLE[AR][,<DIAGNOSTIC TYPE>]
  COP[IES][,<NUMBER OF OUTPUT COPIES>]
  DIS[PLAY][,<LEGEND TYPE>]
  EXP[LAIN][,<PROGRAM OR COMMAND NAME>[,     ]]
  HEA[DING][,<LINE NUMBER>,<HEADING TEXT>]
  NEW[S][,<PROGRAM NAME>[,    . ]]
  NEX[T IF],<OFF OR ON>,<MODE OPTION>
  OFF[,<MODE OPTION>[, ..  ]]
  ON[,<MODE OPTION>[, . . ]]
  ORI[GIN][,<COORDINATE SYSTEM>,<COORDINATE PAIR>]
  PAG[E][,<MESSAGE>]
  PRI[NTER][,<LINES/IN>[,<COL/IN>[,<LINES/PG>[,<COL/PG>[,<DEVICE>]]]]]
  PRO[FILE]
  RAD[IANCE][,<MINIMUM>,<MAXIMUM>[, .   ]]
  REN[UMBER],<NEW WINDOW NUMBER>
  SPA[CING][,<LINE INCREMENT>,<SAMPLE INCREMENT>]
  SYM[BOLS][,<SYMBOL>,<NUMBER>[[,<SYMBOL>],<NUMBER>]]
  TAB[ULATE]
  TIC[K INTERVAL][,<PRIMARY COORDINATE SYSTEM>,<COORDINATE PAIR>,
        <SECONDARY COORDINATE SYSTEM>,<COORDINATE PAIR>]
  WIN[DOW][,<COORDINATE SYSTEM>[,<COORDINATE PAIR>[, ... ]]]
  ZON[E][,<UTM ZONE NUMBER>]
```

```
...

EXI[T]

{@FREE 3    }
{@REWIND 3.}

...
```

1 7605

CONTROL PROGRAM

THIS PROGRAM ADJUSTS AND/OR DIAGRAMS A NETWORK OF CONTROL POINTS FOR A LANDSAT MSS SCENE PARAMETERS FROM THIS ADJUSTMENT ARE USED BY PICTAB, CLASSIFY, PRTDENS, PRTCLASS, AND PLTCLASS IN REGISTERING LANDSAT MSS DATA TO THE EARTH

RUNSTREAM

```
...

@XQT[,E]  CONTROL

{ ADJ[UST]
  ATT[ITUDE][,<DEGREES PITCH>,<DEGREES ROLL>]
  CLE[AR][,<DIAGNOSTIC TYPE>]
  DIA[GRAM][,<TYPE OF POINTS>]
  EXP[LAIN][,<PROGRAM OR COMMAND NAME>[, ... ]]
  NEW[S][,<PROGRAM NAME>[, ... ]]
  NEX[T IF],<OFF OR ON>,<MODE OPTION>
  OFF[,<MODE OPTION>[, ... ]]
  ON[,<MODE OPTION>[, ... ]]
  PAG[E][,<MESSAGE>]
  [POINT,]<POINT NUMBER>,[SCAN,]<LINE>,<SAMPLE>,
       <EARTH COORDINATE SYSTEM>,<COORDINATE PAIR>[,<DESCRIPTION>]
  SCE[NE][,<LANDSAT SCENE NUMBER>,<SAMPLES/SCENE>]
  ZON[E][,<UTM ZONE NUMBER>] }

...

EXIT

...
```


NOTES

1. THE CONTROL NETWORK, COMPOSED OF SCENE, ATTITUDE, AND POINT STATEMENTS, IS NORMALLY MAINTAINED IN A SYMBOLIC ELEMENT WITHIN A DISK FILE. THIS ELEMENT IS CREATED AND UPDATED USING THE @ED EXEC COMMAND. THE EXPLICIT USER RUNSTREAM FOR CONTROL IS THEN REDUCED TO THE FOLLOWING STATEMENTS.

```
@ASG,A  <NAME OF FILE CONTAINING ELEMENT>    . BEFORE FIRST @XQT
@XQT[,E]  CONTROL
@ADD  <ELEMENT NAME>
[ADJUST]
[DIAGRAM]
EXIT
@FREE  <NAME OF FILE CONTAINING ELEMENT>    . AFTER LAST @XQT
```

1 7602

CLASSIFY PROGRAM

THIS PROGRAM GENERATES A DENSITY FILE FROM RAW LANDSAT MSS DATA RECORDED ON A COMPUTER-COMPATIBLE TAPE.

RUNSTREAM

```
...

@ASG,BOTH[Z]  3.,U9,<REEL NUMBER>

@REWIND 3.

@XQT[,E]  CLASSIFY

  CHA[NNEL][,<MSS CHANNEL NUMBER>[, . . ]]
  CLE[AR][,<DIAGNOSTIC TYPE>]
  COP[IES][,<NUMBER OF OUTPUT COPIES>]
  DET[ECT]
  EXP[LAIN][,<PROGRAM OR COMMAND NAME>[, . . ]]
  HEA[DING][,<LINE NUMBER>,<HEADING TEXT>]
  NAM[E][,<NAME OF MATERIAL DETECTED>]
  NEW[S][,<PROGRAM NAME>[,    . ]]
  NEX[T IF],<OFF OR ON>,<MODE OPTION>
  OFF[,<MODE OPTION>[, ..  ]]
  ON[,<MODE OPTION>[,  .. ]]
  ORI[GIN][,<COORDINATE SYSTEM>,<COORDINATE PAIR>]
  PAG[E][,<MESSAGE>]
  PRI[NTER][,<LINES/IN>[,<COL/IN>[,<LINES/PG>[,<COL/PG>[,<DEVICE>]]]]]
  RAD[IANCE][,<MINIMUM>,<MAXIMUM>[,    . ]]
  WIN[DOW][,<COORDINATE SYSTEM>[,<COORDINATE PAIR>[, ... ]]]
  ZON[E][,<UTM ZONE NUMBER>]

...

EXIT

{@FREE 3.  }
{@REWIND 3.}

...
```

NOTES

1. CONTROL MUST BE EXECUTED IN THE SAME RUN, PRIOR TO CLASSIFY.

2. TO PROCESS AN ENTIRE LANDSAT SCENE, EXECUTE CLASSIFY 4 TIMES, ONCE WITH EACH OF THE 4 COMPUTER-COMPATIBLE TAPES FOR A SCENE.

1 7605

PRTDENS PROGRAM

THIS PROGRAM PRODUCES LINE-PRINTER DISPLAYS FROM DENSITY FILES PREVIOUSLY CREATED BY THE CLASSIFY PROGRAM.

RUNSTREAM

```
...

@XQT[,E]  PRTDENS

  CLE[AR][,<DIAGNOSTIC TYPE>]
  COP[IES][,<NUMBER OF OUTPUT COPIES>]
  DEN[SITY][,<MINIMUM>,<MAXIMUM>[,<COUNTS/PIXEL>]]
  DIS[PLAY][,<LEGEND TYPE>]
  EXP[LAIN][,<PROGRAM OR COMMAND NAME>[, .    ]]
  HEA[DING][,<LINE NUMBER>,<HEADING TEXT>]
  NEW[S][,<PROGRAM NAME>[,  .. ]]
  NEX[T IF],<OFF OR ON>,<MODE OPTION>
  OFF[,<MODE OPTION>[, ..  ]]
  ON[,<MODE OPTION>[, ..  ]]
  ORI[GIN][,<COORDINATE SYSTEM>,<COORDINATE PAIR>]
  PAG[E][,<MESSAGE>]
  PRI[NTER][,<LINES/IN>[,<COL/IN>[,<LINES/PG>[,<COL/PG>[,<DEVICE>]]]]]
  REN[UMBER],<NEW WINDOW NUMBER>
  SYM[BOLS][,<SYMBOL>,<NUMBER>[[,<SYMBOL>],<NUMBER>]]
  WIN[DOW][,<COORDINATE SYSTEM>[,<COORDINATE PAIR>[, ... ]]]
  ZON[E][,<UTM ZONE NUMBER>]

...

EXI[T]

...
```

NOTES

1. CLASSIFY MUST BE EXECUTED IN THE SAME RUN, PRIOR TO PRTDENS.
2. UPON EXIT, PRTDENS DESTROYS THE DENSITY FILES UNLESS SAVE HAS BEEN SPECIFIED.
3. PRTDENS IS NORMALLY USED ONLY FOR DEBUGGING AND INSTRUCTIONAL PURPOSES.

1 7602

PRTCLASS PROGRAM

THIS PROGRAM PRODUCES LINE-PRINTER MAPS FROM DENSITY FILES PREVIOUSLY CREATED BY THE CLASSIFY PROGRAM.

RUNSTREAM

```
...
@XQT[,E]  PRTCLASS
(
CLE[AR][,<DIAGNOSTIC TYPE>]
COP[IES][,<NUMBER OF OUTPUT COPIES>]
DEN[SITY][,<MINIMUM>,<MAXIMUM>[,<COUNTS/PIXEL>]]
EXP[LAIN][,<PROGRAM OR COMMAND NAME>[,     ]]
HEA[DING][,<LINE NUMBER>,<HEADING TEXT>]
MAP[,<MAXIMUM NUMBER OF SUB-WINDOWS>]
NEW[S][,<PROGRAM NAME>[, ... ]]
NEX[T IF],<OFF OR ON>,<MODE OPTION>
OFF[,<MODE OPTION>[, ... ]]
ON[,<MODE OPTION>[, ... ]]
ORI[GIN][,<COORDINATE SYSTEM>,<COORDINATE PAIR>]
PAG[E][,<MESSAGE>]
PRI[NTER][,<LINES/IN>[,<COL/IN>[,<LINES/PG>[,<COL/PG>[,<DEVICE>]]]]]
REN[UMBER],<NEW WINDOW NUMBER>
SCA[LE][,1/<DENOMINATOR OF REPRESENTATIVE FRACTION>]
SYM[BOLS][,<SYMBOL>,<NUMBER>[[,<SYMBOL>],<NUMBER>]]
TIC[K INTERVAL][,<PRIMARY COORDINATE SYSTEM>,<COORDINATE PAIR>,
       <SECONDARY COORDINATE SYSTEM>,<COORDINATE PAIR>]
WIN[DOW][,<COORDINATE SYSTEM>[,<COORDINATE PAIR>[,   . ]]]
ZON[E][,<UTM ZONE NUMBER>]
)
...
EXI[T]
...
```

NOTES

1. CLASSIFY MUST BE EXECUTED IN THE SAME RUN, PRIOR TO PRTCLASS.
2. UPON EXIT, PRTCLASS DESTROYS THE DENSITY FILES UNLESS SAVE HAS BEEN SPECIFIED.

1 7602

PLTCLASS PROGRAM

THIS PROGRAM PRODUCES PEN-PLOTTER MAPS FROM DENSITY FILES PREVIOUSLY CREATED BY THE CLASSIFY PROGRAM.

RUNSTREAM

```
...

@XQT[,E]  PLTCLASS

  CLE[AR][,<DIAGNOSTIC TYPE>]
  COP[IES][,<NUMBER OF OUTPUT COPIES>]
  DEN[SITY][,<MINIMUM>,<MAXIMUM>[,<COUNTS/PIXEL>]]
  EXP[LAIN][,<PROGRAM OR COMMAND NAME>[, ... ]]
  HEA[DING][,<LINE NUMBER>,<HEADING TEXT>]
  MAP[,<MAXIMUM NUMBER OF SUB-WINDOWS>]
  NEW[S][,<PROGRAM NAME>[, . . ]]
  NEX[T IF],<OFF OR ON>,<MODE OPTION>
  OFF[,<MODE OPTION>[, ... ]]
  ON[,<MODE OPTION>[, ... ]]
  ORI[GIN][,<COORDINATE SYSTEM>,<COORDINATE PAIR>]
  PAG[E][,<MESSAGE>]
  PLO[TTER]
  REN[UMBER],<NEW WINDOW NUMBER>
  SCA[LE][,1/<DENOMINATOR OF REPRESENTATIVE FRACTION>]
  TIC[K INTERVAL][,<PRIMARY COORDINATE SYSTEM>,<COORDINATE PAIR>,
        <SECONDARY COORDINATE SYSTEM>,<COORDINATE PAIR>]
  WIN[DOW][,<COORDINATE SYSTEM>[,<COORDINATE PAIR>[, ... ]]]
  ZON[E][,<UTM ZONE NUMBER>]

...

EXI[T]

...
```

NOTES

1. CLASSIFY MUST BE EXECUTED IN THE SAME RUN, PRIOR TO PLTCLASS.
2. UPON EXIT, PLTCLASS DESTROYS THE DENSITY FILES UNLESS SAVE HAS BEEN SPECIFIED

1 7602

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1 7602

STATUS PROGRAM

THIS PROGRAM ALLOWS A DEMAND TERMINAL USER TO MONITOR THE EXECUTION OF DAM PACKAGE PROGRAMS IN OTHER DEMAND OR BATCH RUNS.

RUNSTREAM

```
...

aXQT[,E]  STATUS

  EXP[LAIN][,<PROGRAM OR COMMAND NAME>[, ... ]]
  NEW[S][,<PROGRAM NAME>[,  .. ]]
  NEX[T IF],<OFF OR ON>,<MODE OPTION>
  OFF[,<MODE OPTION>[,  .. ]]
  ON[,<MODE OPTION>[, ... ]]
  <RUNID>[,<MAXIMUM NUMBER OF RUNS>]
  <INDEX>

...

aEOF

...
```

NOTES

1. A SLASH (/) IN A RUNID MATCHES WITH ANY CHARACTER.
2. <RUNID> PROVIDES SUMMARY INFORMATION (INCLUDING INDEX) ABOUT ALL RECENT RUNS MATCHING THE RUNID
3. <INDEX> PROVIDES DETAILED INFORMATION ABOUT ALL PROGRAMS EXECUTED IN THE INDEXED RUN.

DAM PACKAGE APPENDIX D: COMMAND DOCUMENTATION

1 7605

COMMANDS

THE GENERAL FORMS FOR ALL COMMANDS ARE LISTED BELOW MOST PROGRAMS HAVE DEFAULT VALUES FOR MANY OF THESE COMMANDS THESE DEFAULT VALUES DEPEND ON THE COMPUTER INSTALLATION, THE PROGRAM, AND WHETHER THE RUN IS BATCH OR DEMAND

ADJ[UST]

ALI[GN],SCA[N],<LINE>,<SAMPLE>,<EARTH COORDINATE SYSTEM>,
<COORDINATE PAIR>

ATT[ITUDE][,<DEGREES PITCH>,<DEGREES ROLL>]

CHA[NNEL][,<MSS CHANNEL NUMBER>[, ..]]

CLE[AR][,<DIAGNOSTIC TYPE>]

COP[IES][,<NUMBER OF OUTPUT COPIES>]

CRO[SSTAB]

DEN[SITY][,<MINIMUM>,<MAXIMUM>]

DET[ECT]

DIA[GRAM][,<TYPE OF POINTS>]

DIS[PLAY][,<LEGEND TYPE>]

EXI[T]

EXP[LAIN][,<PROGRAM OR COMMAND NAME>[, . .]]

HEA[DING][,<LINE NUMBER>,<HEADING TEXT>]

MAP[,<MAXIMUM NUMBER OF SUB-WINDOWS>]

NAM[E][,<NAME OF MATERIAL DETECTED>]

NEW[S][,<PROGRAM NAME>[, ...]]

NEX[T IF],<OFF OR ON>,<MODE OPTION>

OFF[,<MODE OPTION>[, ..]]

ON[,<MODE OPTION>[, ...]]

ORI[GIN][,<COORDINATE SYSTEM>,<COORDINATE PAIR>]

PAG[E][,<MESSAGE>]

```
PLO[TTER]

[POINT,]<POINT NUMBER>,[SCAN,]<LINE>,<SAMPLE>,
       <EARTH COORDINATE SYSTEM>,<COORDINATE PAIR>[,<DESCRIPTION>]

PRI[NTER][,<LINES/IN>[,<COL/IN>[,<LINES/PG>[,<COL/PG>[,<DEVICE>]]]]]

PRO[FILE]

RAD[IANCE][,<MINIMUM>,<MAXIMUM>[, . . ]]

REN[UMBER],<NEW WINDOW NUMBER>

SCA[LE][,1/<DENOMINATOR OF REPRESENTATIVE FRACTION>]

SCE[NE][,<LANDSAT SCENE NUMBER>,<SAMPLES/SCENE>]

SPA[CING][,<LINE INCREMENT>,<SAMPLE INCREMENT>]

SYM[BOLS][,<SYMBOL>,<NUMBER>[[,<SYMBOL>],<NUMBER>]]

TAB[ULATE]

TIC[K INTERVAL][,<PRIMARY COORDINATE SYSTEM>,<COORDINATE PAIR>,
       <SECONDARY COORDINATE SYSTEM>,<COORDINATE PAIR>]

TOT[AL]

WIN[DOW][,<COORDINATE SYSTEM>[,<COORDINATE PAIR>[, ..  ]]]

ZON[E][,<UTM ZONE NUMBER>]
```

1 7602

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1 7602

ADJUST COMMAND

ADJ[UST]

EXPLANATION

THIS COMMAND ADJUSTS THE CONTROL NETWORK

RESTRICTIONS

1. THE NETWORK WILL NOT BE ADJUSTED UNLESS VALID SCENE, ATTITUDE, AND POINT COMMANDS HAVE BEEN PREVIOUSLY ENTERED.

PROGRAMS

CONTROL

1 7602

ALIGN COMMAND

ALI[GN],SCA[N],<LINE>,<SAMPLE>, {DEG[REES],<LATITUDE>,<LONGITUDE> / KM,<EAST>,<NORTH> / MET[RES],<EAST>,<NORTH>}

EXPLANATION

THIS COMMAND SPECIFIES A POINT WHOSE SCANNER COORDINATES AND EARTH COORDINATES ARE TO BE ALIGNED. THIS RE-ALIGNMENT SHIFTS THE RELATION BETWEEN SCANNER COORDINATES AND EARTH COORDINATES

EXAMPLES

ALIGN,SCAN,1317,819,DEGREES,30.2655,98.1380

RESTRICTIONS

1. THIS COMMAND DESTROYS THE CURRENT ORIGIN.

PROGRAMS

PICTAB

1 7602

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1 7602

ATTITUDE COMMAND

ATT[ITUDE][,<DEGREES PITCH>,<DEGREES ROLL>]

EXPLANATION

THIS COMMAND SPECIFIES THE ATTITUDE OF THE LANDSAT SPACECRAFT AT THE CENTER OF THE MSS SCENE

EXAMPLES

ATTITUDE,+1.43,-0.18

RESTRICTIONS

1. PITCH AND ROLL MUST BE SIGNED

PROGRAMS

CONTROL

1 7602

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1 7602

CHANNEL COMMAND

CHA[NNEL][,<MSS CHANNEL NUMBER>[, ...]]

EXPLANATION

THIS COMMAND SPECIFIES THE MSS CHANNEL TO BE USED IN PROCESSING SUBSEQUENT WINDOWS.

EXAMPLES

CHAN,4

RESTRICTIONS

1. VALID CHANNELS ARE FROM -4 TO +4, INCLUSIVE.
2. AFTER CHANGING CHANNELS, THE RADIANCE COMMAND MUST BE USED TO SPECIFY RADIANCE LIMITS FOR THE NEW CHANNEL(S).
3. ONLY ONE CHANNEL MAY BE SPECIFIED FOR PICTAB (MULTI-CHANNEL CAPABILITY NOT YET IMPLEMENTED FOR PICTAB).

PROGRAMS

PICTAB
CLASSIFY

1 7602

CLEAR COMMAND

CLE[AR][. {WARNINGS}]
          {ERRORS }

EXPLANATION

THIS COMMAND CLEARS PREVIOUS WARNINGS OR FATAL ERRORS.

RESTRICTIONS

1. WARNINGS ARE AUTOMATICALLY CLEARED AFTER EACH ATTEMPT TO PROCESS A WINDOW.
2. ERRORS SHOULD USUALLY ONLY BE CLEARED BY SYSTEMS PERSONNEL WHEN DEBUGGING PROGRAMS

PROGRAMS

PICTAB
CONTROL
CLASSIFY
PRTDENS
PRTCLASS
PLTCLASS

1 7602

COPIES COMMAND

COP[IES][,<NUMBER OF OUTPUT COPIES>]

EXPLANATION

THIS COMMAND SPECIFIES THE NUMBER OF COPIES OF OUTPUT WINDOWS TO BE PRINTED AT ONSITE LINE PRINTERS.

EXAMPLES

COPIES,2

RESTRICTIONS

1. NOT MORE THAN 5 COPIES MAY BE SPECIFIED.

PROGRAMS

PICTAB
CLASSIFY
PRTDENS
PRTCLASS
PLTCLASS

1 7602

CROSSTAB COMMAND

CRO[SSTAB]

EXPLANATION

NOT YET IMPLEMENTED

EXAMPLES

CROSS

RESTRICTIONS

1.

PROGRAMS

PICTAB

1 7602

DENSITY COMMAND

DEN[SITY][,<MINIMUM>,<MAXIMUM>]

EXPLANATION

THIS COMMAND SPECIFIES THE DENSITY RANGE TO BE USED IN PROCESSING SUBSEQUENT WINDOWS.

EXAMPLES

DENSITY,0,18

RESTRICTIONS

1. VALID DENSITIES ARE FROM 0 TO 18, INCLUSIVE.

PROGRAMS

PRTDENS
PRTCLASS
PLTCLASS

1 7602

DETECT COMMAND

DETIECT]

EXPLANATION

THIS COMMAND DETECTS ALL OCCURRENCES OF THE PREVIOUSLY SPECIFIED SPECTRAL LIMITS WITHIN THE CURRENT WINDOW AND STORES THIS INFORMATION IN A DENSITY FILE.

EXAMPLES

DETECT

RESTRICTIONS

1. THIS COMMAND MAY ONLY BE PERFORMED ONCE WITHIN EACH EXECUTION OF CLASSIFY.

PROGRAMS

CLASSIFY

1 7602

DIAGRAM COMMAND

DIAGRAM[, {CONTROL POINTS}]
          {CHECK POINTS }

EXPLANATION

THIS COMMAND DIAGRAMS THE CONTROL NETWORK.

EXAMPLES

```
DIAGRAM            ,, DIAGRAM ALL POINTS

DIAGRAM,CONTROL    ,, DIAGRAM ONLY CONTROL POINTS
```

RESTRICTIONS

1. THE NETWORK WILL NOT BE DIAGRAMMED UNLESS VALID SCENE
   AND POINT COMMANDS HAVE BEEN PREVIOUSLY ENTERED

PROGRAMS

CONTROL

1 7602

DISPLAY COMMAND

DIS[PLAY][, {SHO[RT LEGEND]}]
{LON[G LEGEND] }

EXPLANATION

THIS COMMAND DISPLAYS DATA FOR THE CURRENT WINDOW

EXAMPLES

```
DISPLAY          ,, DISPLAY WINDOW WITHOUT SYMBOL LEGEND

DISPLAY,LONG     ,, DISPLAY WINDOW WITH LONG SYMBOL LEGEND
```

RESTRICTIONS

1. SUB-WINDOW DISPLAYS MAY NOT BE SPECIFIED

PROGRAMS

PICTAB
PRTDENS

1 7602

EXIT COMMAND

EXI[T]

EXPLANATION

THIS COMMAND TERMINATES THE CURRENTLY EXECUTING PROGRAM.

RESTRICTIONS

1. ANY PROCESSING ALREADY REQUESTED, BUT NOT YET PERFORMED, IS COMPLETED BEFORE PROGRAM TERMINATION.

PROGRAMS

PICTAB
CONTROL
CLASSIFY
PRTDENS
PRTCLASS
PLTCLASS

1 7605

EXPLAIN COMMAND

```
EXP[LAIN][,( LANDSAT          ) [,     ]]
           ( DAM PACKAGE      )
           ( RULES            )
           ( FILES            )
           ( COORDINATES      )
           ( LOCAL STANDARDS  )
           ( EXEC COMMANDS    )
           ( <EXEC COMMAND>   )
           ( PROGRAMS         )
           ( <PROGRAM NAME>   )
           ( COMMANDS         )
           ( <COMMAND>        )
```

EXPLANATION

THIS COMMAND REQUESTS EXPLANATIONS FOR THE LANDSAT SATELLITES, THE DAM PACKAGE, ITS RULES, PROGRAMS AND COMMANDS

EXAMPLES

EXPLAIN,EXEC COMMANDS

EXPL,@EOF

EXP,PRTCLASS

EXP,HEADING

RESTRICTIONS

1. TO INTERRUPT AN EXPLANATION WHILE AT A TERMINAL, DEPRESS THE 'INTERRUPT' OR 'BREAK' KEY -- TO RESUME THE EXPLANATION, DEPRESS THE 'CARRIAGE RETURN' KEY.

2. ALL EXEC COMMANDS MUST START WITH THE CHARACTER @.

3. PROGRAM NAMES MUST BE GIVEN IN FULL.

PROGRAMS

ALL PROGRAMS

1 7602

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1 7602

HEADING COMMAND

HEA[DING]I[, $\begin{Bmatrix}1\\2\end{Bmatrix}$,<HEADING TEXT>]

EXPLANATION

THIS COMMAND SPECIFIES THE TEXT TO BE USED ON LINES 1 AND 2 OF SUBSEQUENT PAGE HEADINGS (LINE 0 IS SUPPLIED BY THE SYSTEM.)

EXAMPLES

```
HEADING,1,SOMERVILLE 7.5' QUADRANGLE    ,, 1ST LINE OF HEADING
HEAD,2,                                 ,, 2ND LINE IS BLANK
```

RESTRICTIONS

1. MAXIMUM LENGTH OF HEADING TEXT IS 72 CHARACTERS.

PROGRAMS

PICTAB
CLASSIFY
PRTDENS
PRTCLASS
PLTCLASS

1 7602

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1 7602

MAP COMMAND

MAP[,<MAXIMUM NUMBER OF SUB-WINDOWS>]

EXPLANATION

THIS COMMAND GENERATES WINDOW OR SUB-WINDOW MAPS, USING CURRENT SPECIFICATIONS.

EXAMPLES

```
MAP       ,, MAP THE ENTIRE WINDOW

MAP,1     ,, MAP 1 SUB-WINDOW

MAP,4     ,, MAP UP TO 4 SUB-WINDOWS
```

RESTRICTIONS

1. SUB-WINDOWS ARE THE SIZE OF THE CURRENT PRIMARY TICK INTERVALS (SEE TICK COMMAND).
2. SUB-WINDOWS MAY NOT BE SPECIFIED IF THE PRIMARY TICK INTERVAL IS IN SCANNER COORDINATES.
3. SUB-WINDOW MAPS, IF SPECIFIED, ARE GENERATED UNTIL THE ENTIRE WINDOW IS COVERED, OR THE MAXIMUM NUMBER OF SUB-WINDOWS IS REACHED, WHICHEVER COMES FIRST.

PROGRAMS

PRTCLASS
PLTCLASS

1 7602

NAME COMMAND

NAM[E][,<NAME OF MATERIAL DETECTED>]

EXPLANATION

THIS COMMAND SPECIFIES THE NAME OF THE MATERIAL TO BE DETECTED

RESTRICTIONS

1. MAXIMUM NAME LENGTH IS 24 CHARACTERS.

PROGRAMS

CLASSIFY

1 7602

NEWS COMMAND

NEW[S]], {DAM PACKAGE / <PROGRAM NAME>} [, ...]]

EXPLANATION

THIS COMMAND REQUESTS NEWS OF RECENT REVISIONS TO THE DAM PACKAGE AND/OR ITS PROGRAMS

EXAMPLES

NEWS,PICTAB

RESTRICTIONS

1. PROGRAM NAMES MUST BE GIVEN IN FULL.

PROGRAMS

ALL PROGRAMS

1 7602

NEXT COMMAND

NEX[T IF], {OFF / ON} , {BAT[CH] / CHE[CKOUT] / CON[FIRM] / ECH[O] / TRA[CE]}

EXPLANATION

THIS COMMAND SPECIFIES THAT THE NEXT COMMAND IS TO BE PERFORMED IF AND ONLY IF THE SPECIFIED MODE OPTION IS SET AS SPECIFIED
INTERVENING REMARKS AND/OR EXEC COMMANDS ARE NOT AFFECTED

EXAMPLES

```
NEXT,ON,BATCH     ,, PERFORM NEXT COMMAND ONLY IF IN BATCH RUN
```

RESTRICTIONS

1. THIS COMMAND APPLIES ONLY TO THE IMMEDIATELY FOLLOWING COMMAND.
2. THIS COMMAND IS NORMALLY USED ONLY BY SYSTEMS PERSONNEL.

PROGRAMS

ALL PROGRAMS

1 7602

OFF COMMAND

```
OFF[, {BAT[CH]    } [, . . ]]
      {CHE[CKOUT] }
      {CON[FIRM]  }
      {DEF[AULT]  }
      {ECH[O]     }
      {TRA[CE]    }
```

EXPLANATION

THIS COMMAND TURNS OFF THE SPECIFIED MODE OPTIONS. MEANING OF THE MODE OPTIONS IS AS FOLLOWS

BATCH	PROCESS AS BATCH
CHECKOUT	CHECK ALL COMMANDS BUT DO NOT PERFORM THEM
CONFIRM	PRINT CONFIRMATION OF COMMAND SPECIFICATIONS
DEFAULT	PROCESS DEFAULT COMMANDS (NOT AVAILABLE TO USER -- MAY NOT BE COMBINED WITH ANY OTHER OPTION)
ECHO	ECHO INPUT COMMAND STATEMENTS
TRACE	TRACE PROGRAM FLOW (FOR USE IN DEBUGGING SOFTWARE)

EXAMPLES

```
OFF,CHECKOUT,ECHO
```

RESTRICTIONS

1. MODE OPTIONS NOT SPECIFIED REMAIN UNCHANGED.

PROGRAMS

ALL PROGRAMS

1 7602

ON COMMAND

```
ON[, {BAT[CH]    } [, ... ]]
     {CHE[CKOUT] }
     {CON[FIRM]  }
     {DEF[AULT]  }
     {ECH[O]     }
     {TRA[CE]    }
```

EXPLANATION

THIS COMMAND TURNS ON THE SPECIFIED MODE OPTIONS. MEANING OF THE MODE OPTIONS IS AS FOLLOWS:

BATCH	PROCESS AS BATCH
CHECKOUT	CHECK ALL COMMANDS BUT DO NOT PERFORM THEM
CONFIRM	CONFIRM COMMAND SPECIFICATIONS
DEFAULT	PROCESS DEFAULT COMMANDS (NOT AVAILABLE TO USER -- MAY NOT BE COMBINED WITH ANY OTHER OPTION)
ECHO	ECHO INPUT COMMAND STATEMENTS
TRACE	TRACE PROGRAM FLOW (FOR USE IN DEBUGGING SOFTWARE)

EXAMPLES

```
ON,CHECKOUT,ECHO
```

RESTRICTIONS

1. MODE OPTIONS NOT SPECIFIED REMAIN UNCHANGED.

PROGRAMS

ALL PROGRAMS

1 7602

ORIGIN COMMAND

ORI[GIN]I, { SCA[N],<LINE>,<SAMPLE> / DEG[REES],<LATITUDE>,<LONGITUDE> / KM,<EAST>,<NORTH> / MET[RES],<EAST>,<NORTH> }]

EXPLANATION

THIS COMMAND SPECIFIES ORIGIN COORDINATES FOR SUBSEQUENT WINDOWS

EXAMPLES

```
ORIGIN,SCAN,1537,623     ,, SCAN LINE AND SAMPLE

ORIG,KM,634,3930.25      ,, UTM EAST AND NORTH IN KILOMETRES

ORI,DEG,29.6250,98 5     ,, LATITUDE & LONGITUDE IN DECIMAL DEGREES

ORI,DEG,29:37:30,98:30   ,, SAME LATITUDE & LONGITUDE IN SEXAGENARY
                         ,, <DEG>:<MIN>:<SEC> OR <DEG>/<MIN>/<SEC>
```

RESTRICTIONS

1. THE ORIGIN MUST NOT LIE MORE THAN 200 LINES OR SAMPLES OUTSIDE OF THE SCENE.
2. LATITUDE IS ASSUMED NORTH AND MUST BE POSITIVE.
3. LONGITUDE IS ASSUMED WEST AND MUST BE POSITIVE.
4. SCAN LINE AND SAMPLE MAY NOT CONTAIN DECIMAL POINTS.
5. WHEN SPECIFYING KM OR METRES, THE COMPLETE UNIVERSAL TRANSVERSE MERCATOR (UTM) EASTING AND NORTHING (NOT THE ABBREVIATED MILITARY GRID REFERENCE) MUST BE USED.
6. THE ZONE COMMAND MUST BE USED TO SPECIFY THE UTM ZONE.

PROGRAMS

PICTAB	PRTDENS	PLTCLASS
CLASSIFY	PRTCLASS	

1 7602

PAGE COMMAND

PAG[E][,<MESSAGE>]

EXPLANATION

THIS COMMAND SKIPS THE PRINTOUT TO THE TOP OF THE NEXT PAGE AND PRINTS THE SPECIFIED MESSAGE.

RESTRICTIONS

1. MAXIMUM MESSAGE LENGTH IS 24 CHARACTERS.

PROGRAMS

ALL PROGRAMS

1 7602

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1 7602

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1 7602

POINT COMMAND

[POINT,]<POINT NUMBER>[,SCAN][,<LINE>,<SAMPLE>],

{DEG[REES][,<LATITUDE>,<LONGITUDE>]
{KM[,<EAST>,<NORTH>]
{MET[RES][,<EAST>,<NORTH>]
} [,<DESCRIPTION>]

EXPLANATION

THIS COMMAND SPECIFIES BOTH THE SCANNER COORDINATES AND THE EARTH COORDINATES FOR A CONTROL OR CHECK POINT, OR EITHER SET OF COORDINATES FOR A QUERY POINT (THE PROGRAM COMPUTES THE MISSING COORDINATES FOR A QUERY POINT)

EXAMPLES

POINT,5,SCAN,1345,758,DEGREES,35 1362,94.8361

5,1345,758,DEG,35.1362,94 8361

RESTRICTIONS

1. VALID CONTROL POINT NUMBERS ARE FROM +1 TO +900, INCLUSIVE.
2. VALID CHECK POINT NUMBERS ARE FROM -1 TO -900, INCLUSIVE.
3. VALID QUERY POINT NUMBERS ARE FROM -1000 TO -9000, INCLUSIVE.
4. CONTROL POINTS ARE USED IN COMPUTING THE NETWORK ADJUSTMENT
5. CHECK POINTS ARE CHECKED AGAINST THE NETWORK ADJUSTMENT
6. QUERY POINTS MAY ONLY BE SPECIFIED AFTER A NETWORK HAS BEEN SUCCESSFULLY ADJUSTED.
7. SCAN LINE AND SAMPLE MAY NOT CONTAIN DECIMAL POINTS.

PROGRAMS

CONTROL

1 7602

PRINTER COMMAND

PRI[NTER]

[,<LINES/INCH>[,<COLUMNS/INCH>

[,<LINES/PAGE>[,<COLUMNS/PAGE>

[,<DEVICE-TYPE MNEMONIC>]]]]]

EXPLANATION

THIS COMMAND IS USED TO OVERRIDE THE NORMAL PRINTER CHARACTERISTICS AT A COMPUTER INSTALLATION

EXAMPLES

PRINTER,8,10

RESTRICTIONS

1. THIS COMMAND SHOULD BE USED RARELY, AND THEN ONLY BY PERSONNEL FAMILIAR WITH THE LOCAL SYSTEMS SOFTWARE.

2. THIS COMMAND MAY BE USED ONLY BEFORE THE FIRST WINDOW IN THE CURRENT PROGRAM HAS BEEN PROCESSED.

PROGRAMS

PICTAB
CLASSIFY
PRTDENS
PRTCLASS

1 7602

PROFILE COMMAND

PROIFILE]

EXPLANATION

THIS COMMAND PROFILES DATA FOR THE CURRENT WINDOW.

EXAMPLES

PROFILE

RESTRICTIONS

1. NOT YET IMPLEMENTED

PROGRAMS

PICTAB

1 7602

RADIANCE COMMAND

RAD[IANCE][,<MINIMUM>,<MAXIMUM>[, ...]]

EXPLANATION

THIS COMMAND SPECIFIES THE RADIANCE LIMITS TO BE USED IN PROCESSING SUBSEQUENT WINDOWS

EXAMPLES

```
CHANNEL,2
RADIANCE,0,14          ,, LIMITS 0 THRU 14 FOR CHANNEL 2
```

RESTRICTIONS

1. VALID RADIANCE VALUES ARE FROM 0 TO 255, INCLUSIVE. FOR ERTS-1 AND LANDSAT-2, VALUES OVER 127 REPRESENT FLAGS, NOT TRUE RADIANCE.

2. NEW RADIANCE LIMITS MUST BE SPECIFIED AFTER CHANGING CHANNELS.

3. IN PICTAB, THE EFFECT OF RADIANCE COMMANDS IS NOT CUMULATIVE, AND THE LIMITS IN A RADIANCE COMMAND REPLACE THOSE SPECIFIED IN THE PREVIOUS RADIANCE COMMAND.

4. IN CLASSIFY, THE EFFECT OF RADIANCE COMMANDS IS CUMULATIVE, AND THE LIMITS IN A RADIANCE COMMAND ARE COMBINED WITH THOSE SPECIFIED IN PREVIOUS RADIANCE COMMANDS THE ONLY RESTRICTION IS THAT THE FIRST PAIR OF LIMITS (IE THOSE FOR THE FIRST CHANNEL) MUST NOT DUPLICATE OR OVERLAP WITH ANY SPECIFIED IN PREVIOUS RADIANCE COMMANDS

PROGRAMS

PICTAB
CLASSIFY

1 7602

RENUMBER COMMAND

REN[UMBER],<NEW WINDOW NUMBER>

EXPLANATION

THIS COMMAND CHANGES THE CURRENT WINDOW NUMBER.

EXAMPLES

RENUMBER,129

RESTRICTIONS

1. WINDOW NUMBERS BEGIN WITH 1 AND ARE AUTOMATICALLY INCREMENTED BY 1 UNLESS RENUMBERED
2. VALID WINDOW NUMBERS ARE FROM 1 TO 999.

PROGRAMS

PICTAB
PRTDENS
PRTCLASS
PLTCLASS

1 7602

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1 7602

SCALE COMMAND

SCA[LE][,1/<DENOMINATOR OF REPRESENTATIVE FRACTION>]

EXPLANATION

THIS COMMAND SPECIFIES THE SCALE AT WHICH SUBSEQUENT WINDOWS ARE TO BE MAPPED.

EXAMPLES

SCALE,1/24000 ,, 1 INCH = 2000 FT

SCALE,1/63360 ,, 1 INCH = 1 MILE

RESTRICTIONS

1. MINIMUM VALID DENOMINATOR IS 20000.
2. MAXIMUM VALID DENOMINATOR IS 260000
3. COMMAS MUST NOT APPEAR WITHIN DENOMINATOR.
4. DENOMINATOR MUST NOT CONTAIN A DECIMAL POINT.

PROGRAMS

PRTCLASS
PLTCLASS

1 7602

SCENE COMMAND

SCE[NE][,<LANDSAT SCENE NUMBER>,<SAMPLES/SCENE>]

EXPLANATION

THIS COMMAND SPECIFIES THE LANDSAT SCENE NUMBER AND THE NUMBER OF SAMPLES PER SCENE.

EXAMPLES

SCENE,1037-16244,3240

RESTRICTIONS

1. SAMPLES/SCENE MUST BE IDENTICAL WITH THE VALUE RECORDED ON LANDSAT COMPUTER-COMPATIBLE TAPE AND PROVIDED BY PICTAB.

PROGRAMS

CONTROL

1 7602

SPACING COMMAND

SPA[CING][,<LINE INCREMENT>,<SAMPLE INCREMENT>]

EXPLANATION

THIS COMMAND SPECIFIES THE MSS LINE AND SAMPLE INCREMENTS TO BE USED FOR PROCESSING SUBSEQUENT WINDOWS.

EXAMPLES

```
SPACING,3,2        ,, EVERY THIRD LINE & EVERY SECOND SAMPLE
```

RESTRICTIONS

1. THE LINE AND SAMPLE INCREMENTS MUST NOT CONTAIN ANY DECIMAL POINTS.

2. VALID LINE AND SAMPLE INCREMENTS ARE BETWEEN 1 AND 10.

PROGRAMS

PICTAB

1 7602

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1 7602

SYMBOLS COMMAND

SYM[BOLS][,<SYMBOL>,<NUMBER>[[,<SYMBOL>],<NUMBER>]]

EXPLANATION

THIS COMMAND SPECIFIES THE SYMBOLS TO BE USED FOR SUBSEQUENT LINE-PRINTER DISPLAYS AND/OR MAPS.

EXAMPLES

```
SYMBOLS,A,10       ,, 'A'    = 010

SYM,B,11,14        ,, 'B'    = 011 TO 014

SYM,C,15,19        ,, 'C'    = 015 TO 019

SYM,XOAV,20,29     ,, 'XOAV' = 020 TO 029  (OVERPRINT)

SYM, ,30,255       ,, ' '    = 030 TO 255

SYM,0,10,3,13      ,, '0'    = 010
                   ,, '1'    = 011
                   ,, '2'    = 012
                   ,, '3'    = 013
```

RESTRICTIONS

1. ANY SINGLE CHARACTER (INCLUDING BLANK) MAY BE SPECIFIED AS A SYMBOL EXCEPT ASTERISK (*), PLUS (+), COLON (:), OR COMMA (,).

2. ANY STRING OF 2 TO 4 CHARACTERS (EXCLUDING COMMA) MAY BE SPECIFIED AS A SYMBOL WHEN MORE THAN ONE CHARACTER IS SPECIFIED, THEY WILL BE OVERPRINTED.

3. THE EFFECT OF SYMBOL COMMANDS, UNLESS THE NUMBERS DUPLICATE OR OVERLAP WITH NUMBERS SPECIFIED IN PREVIOUS SYMBOL COMMANDS, IS CUMULATIVE.

PROGRAMS

PICTAB PRTCLASS
PRTDENS

1 7602

TABULATE COMMAND

TAB[ULATE]

EXPLANATION

NOT YET IMPLEMENTED

EXAMPLES

TABULATE

RESTRICTIONS

1.

PROGRAMS

PICTAB

1 7602

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1 7602

TICK COMMAND

TIC[K INTERVAL][,

{SCA[N],<LINES>,<SAMPLES>
DEG[REES],<LATITUDE>,<LONGITUDE>
MIN[UTES],<LATITUDE>,<LONGITUDE>
KM,<EAST>,<NORTH>
MET[RES],<EAST>,<NORTH>} ,

{SCA[N],<LINES>,<SAMPLES>
DEG[REES],<LATITUDE>,<LONGITUDE>
MIN[UTES],<LATITUDE>,<LONGITUDE>
KM,<EAST>,<NORTH>
MET[RES],<EAST>,<NORTH>}]

EXPLANATION

THIS COMMAND SPECIFIES FIRST THE PRIMARY AND THEN THE SECONDARY TICK INTERVALS FOR SUBSEQUENT WINDOWS PRIMARY TICKS ARE ALWAYS PRINTED SECONDARY TICKS ARE PRINTED ONLY WHEN THEY DO NOT CONFLICT WITH OTHER SYMBOLS.

EXAMPLES

TICK,DEG,1,1,MIN,7.5,7.5

TICK,MIN,3.75,7.5,KM,1,1

TICK,MIN,3.45,7:30,KM,1,1

RESTRICTIONS

1. BOTH PRIMARY AND SECONDARY TICKS MUST BE SPECIFIED.

2. THIS COMMAND MAY SPAN UP TO 2 CARDS

3. LATITUDE AND LONGITUDE MAY BE IN DECIMAL OR SEXAGENARY NOTATION

PROGRAMS

PICTAB PLTCLASS
PRTCLASS

1 7602

TOTAL COMMAND

TOT[AL][,<WINDOW NUMBER>[, .]]

EXPLANATION

NOT YET IMPLEMENTED

EXAMPLES

TOTAL,19,20,21,33

RESTRICTIONS

1.

PROGRAMS

PICTAB

1 7602

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1 7602

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1 7602

WINDOW COMMAND

```
WIN[DOW][,
    { SCA[N][,<LINE>,<SAMPLE>[, ... ]]                    }
    { DEG[REES][,<LATITUDE>,<LONGITUDE>[,  .  ]]          }
    { MIN[UTES][,<LATITUDE>,<LONGITUDE>[, ... ]]          }
    { KM[,<EAST>,<NORTH>[, .   ]]                         }
    { MET[RES][,<EAST>,<NORTH>[, ... ]]                   }
    { PRI[NT][,<LINE>,<COLUMN>[, ... ]]                   }
    { CM[,<DOWN>,<RIGHT>[, . . ]]                         }
    { INC[HES][,<DOWN>,<RIGHT>[, ... ]]                   }
```

EXPLANATION

THIS COMMAND SPECIFIES THE ORIGIN-RELATIVE COORDINATES OF THE VERTICES DEFINING A WINDOW WINDOWS ARE DEFINED AS FOLLOWS

ONE VERTEX DEFINES THE RECTANGLE WITH DIAGONAL STRETCHING FROM ORIGIN TO VERTEX.

TWO VERTICES DEFINE THE RECTANGLE WITH DIAGONAL STRETCHING BETWEEN THE VERTICES.

THREE OR MORE VERTICES DEFINE A POLYGON BY ITS CONSECUTIVE CORNERS IN COUNTER-CLOCKWISE ORDER.

EXAMPLES

```
ORIGIN,SCAN,100,0
WINDOW,SCAN,600,120,800,230  ,, RECTANGLE FROM SCAN LINE 700 TO 900
                             ,,   AND SAMPLE 120 TO 230
```

RESTRICTIONS

1. THIS COMMAND MAY SPAN UP TO 10 CARDS.

2. LATITUDE AND LONGITUDE MAY BE IN DECIMAL OR SEXAGENARY NOTATION.

PROGRAMS

PICTAB	PRTCLASS	PRTDENS
CLASSIFY	PLTCLASS	

1 7602

ZONE COMMAND

ZON[E][,<UTM ZONE NUMBER>]

EXPLANATION

THIS COMMAND SPECIFIES THE UNIVERSAL TRANSVERSE MERCATOR (UTM) ZONE NUMBER TO BE USED IN SUBSEQUENT PROCESSING OF UTM COORDINATES.

EXAMPLES

ZONE,18

RESTRICTIONS

1. ONLY STANDARD UTM PROJECTION ZONES (NOT MILITARY GRID REFERENCE 'ZONES') MAY BE USED.

2. THIS COMMAND DESTROYS THE CURRENT ORIGIN.

PROGRAMS

PICTAB
CONTROL
CLASSIFY
PRTCLASS
PLTCLASS

1 7602

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DAM PACKAGE APPENDIX E: SAMPLE RUNSTREAMS

(7605)

DAM PACKAGE APPENDIX E: SAMPLE RUNSTREAMS

1 7602

(THIS PAGE RESERVED FOR FUTURE USE)

DAM PACKAGE APPENDIX E: SAMPLE RUNSTREAMS

1 7602

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1 7602

ERTS-DUP SAMPLE RUN

```
@RUN,U/NR RJT17C,9999-DAM-P,TF5-N12345,25,25                    JONES,RJ
@USE DAM ,TF5-L76758*DAM.
@ASG,A DAM.
@ADD DAM.SETUP
@ASG,BOTH  INN.,U9,RJT17C
@ASG,BOTH  OUT.,U9,XSAVE
@ADD DAM.ERTS-DUP
@FREE,S OLDOUT.
@ASG,BOTH  INN.,U9,RJT17C
@MSG SWAPPING TAPES
@FREE,S OLDINN.
@ASG,BOTH  OUT.,U9,XSAVE
@ADD DAM.ERTS-DUP
@FIN
```

1 7602

ERTS-DUP SAMPLE RUN (JSC ONLY)
==========

```
aRUN,U/NR RJT17C,9999-DAM-P,TF5-N12345,25,25                    JONES,RJ
aUSE DAM.,TF5-L76758*DAM.
aASG,A DAM.
aADD DAM.SETUP
aASG,BOTH/F  INN.,U9,RJT17C
aASG,BOTH/S  OUT ,U9,XSAVE,99,ERTS-1234-56789-1
aADD DAM.ERTS-DUP
aFREE,S OLDOUT.
aASG,BOTH/F  INN.,U9,RJT17C
aMSG SWAPPING TAPES
aFREE,S OLDINN.
aASG,BOTH/S  OUT.,U9,XSAVE,99,ERTS-1234-56789-1
aADD DAM.ERTS-DUP
aFIN
```

DAM PACKAGE APPENDIX E: SAMPLE RUNSTREAMS

1 7602

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DAM PACKAGE APPENDIX E: SAMPLE RUNSTREAMS

1 7602

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1 7605

PICTAB SAMPLE RUN
==========

```
@RUN,U/NR RJT17A,9999-DAM-P,TF5-N12345,8,80                    JONES,RJ
@USE DAM.,TF5-L76758*DAM.
@ASG,A DAM.
@ADD DAM.SETUP
@ASG,BOTH 3.,U9,RJT17A      . SCENE 1092-16305, STRIP 2
@REWIND 3
@XQT PICTAB
SPACING,1,1
WINDOW,PRINT,-200,-60,+200,+60  ,, 401 LINES X 121 COLUMNS,
                                ,,   CENTERED ON ORIGIN
*ALL OTHER DEFAULT COMMANDS ARE ACCEPTABLE
ORIGIN,SCAN,480,1345 ,,,DISPLAY
ORIGIN,SCAN,646,947 ,,,DISPLAY
ORIGIN,SCAN,1094,2052 ,,,DISPLAY
ORIGIN,SCAN,1163,1509 ,,,DISPLAY
ORIGIN,SCAN,1441,896 ,,,DISPLAY
ORIGIN,SCAN,1447,1464 ,,,DISPLAY
ORIGIN,SCAN,1603,1710 ,,,DISPLAY
EXIT
@REWIND 3.
@XQT,E PICTAB    . REPEAT IF PREVIOUS EXECUTION ERROR TERMINATED
@EOF
@FREE 3.
@ASG,BOTH 3.,U9,RJT17B      . SCENE 1092-16305, STRIP 3
@REWIND 3.
@XQT PICTAB
@EOF
@FREE 3.
@FIN
```

1 7605

PICTAB SAMPLE RUN (MULTI-FILE TAPE)
==========

```
@RUN,U/NR RJT17P,9999-DAM-P,TF5-N12345,8,80                    JONES,RJ
@USE DAM.,TF5-L76758*DAM.
@ASG,A DAM
@ADD DAM SETUP
@ASG,BOTV 3 ,U9,RJT17P       SCENE 1092-16305, STRIPS 1,2,3,4
@LOCATE 3 ,2
@XQT PICTAB        PROCESS WINDOWS THAT LIE WITHIN STRIP 2
SPACING,1,1
WINDOW,PRINT,-200,-60,+200,+60  ,, 401 LINES X 121 COLUMNS,
                                ,,   CENTERED ON ORIGIN
*ALL OTHER DEFAULT COMMANDS ARE ACCEPTABLE
ORIGIN,SCAN,480,1345 ,,,DISPLAY
ORIGIN,SCAN,646,947 ,,,DISPLAY
ORIGIN,SCAN,1094,2052 ,,,DISPLAY
ORIGIN,SCAN,1163,1509 ,,,DISPLAY
ORIGIN,SCAN,1441,896 ,,,DISPLAY
ORIGIN,SCAN,1447,1464 ,,,DISPLAY
ORIGIN,SCAN,1603,1710 ,,,DISPLAY
EXIT
@LOCATE,E 3.,2    LOCATE AND
@XQT,E PICTAB    . REPEAT IF PREVIOUS EXECUTION ERROR TERMINATED
@EOF
@LOCATE 3 ,3
@XQT PICTAB        PROCESS WINDOWS THAT LIE WITHIN STRIP 3
@EOF
@FREE 3.
@FIN
```

DAM PACKAGE APPENDIX E: SAMPLE RUNSTREAMS

1 7602

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1 7605

CONTROL SAMPLE RUN
==========

```
@RUN,U/NR RJT17F,9999-DAM-P,TF5-N12345,2,10                    JONES,RJ
@USE DAM ,TF5-L76758*DAM.
@ASG,A DAM.
@ADD DAM.SETUP
@ASG,A USERFILE.
@COPY,S DAM.1092-16305,USERFILE.1092-16305     SEE APPENDIX F
@ED,CPU USERFILE.1092-16305
LOCATE *LATITUDE
DELETE
LOCATE -6,
CHANGE /-6/6/
CHANGE /32.5819/30.5819/
LOCATE -9,
CHANGE /-9/9/
CHANGE /37.1644/30.1644/
EXIT
@XQT CONTROL
@ADD USERFILE.1092-16305
ADJUST
DIAGRAM
EXIT
@FREE USERFILE
@FIN
```

DAM PACKAGE APPENDIX E: SAMPLE RUNSTREAMS

1 7602

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1 7605

CLASSIFY/PRTCLASS SAMPLE RUN
==========

```
@RUN,U/NR RJT17M,9999-DAM-P,TF5-N12345,20,300                    JONES,RJ
@USE DAM ,TF5-L76758*DAM
@ASG,A DAM.
@ADD DAM.SETUP
@ASG,A USERFILE.
@XQT CONTROL
@ADD USERFILE.1092-16305    . NOTE CREATED IN RUN ON PREVIOUS PAGE
ADJUST ,,, EXIT
@FREE USERFILE
@ASG,BOTH 3.,U9,RJT17A
@REWIND 3
@XQT CLASSIFY
COPIES,2
@ADD DAM WATER-LIM
ORIGIN,SCAN, 1 LINE, 1 SAMPLE
WINDOW,SCAN, 2340 LINE, 3240 SAMPLE    ,, EVERYTHING ON THIS TAPE
DETECT ,,, EXIT
@FREE 3.
@ASG,BOTH 3.,U9,RJT17B
@REWIND 3.
@XQT CLASSIFY
@EOF      . RECALL COMMANDS FROM LAST EXECUTION
@FREE 3
@XQT PRTCLASS
COPIES,2
HEADING,1,SAMPLE MAPS FROM THE DAM PACKAGE
SCALE,1/24000
TICK,MINUTES,7.5,7 5,MINUTES,2.5,2.5  ,, PRIMARY 7.5 X 7.5 MINUTES &
                                      ,, SECONDARY 2 5 X 2 5 MINUTES
WINDOW,MINUTES,7 5,7 5   ,, EXTENDS FROM ORIGIN 7.5 MINUTES NORTH & WEST
ORIGIN,DEG,30 15,97.37.5 ,,,HEADING,2,AUSTIN E 7 5' QUAD ,,,MAP
ORIGIN,DEG,30:15,97 45 ,,,HEADING,2,AUSTIN W 7 5' QUAD ,,,MAP
SCALE,1/62500
TICK,MINUTES,15,15,MINUTES,7 5,7.5  ,, PRIMARY 15 X 15 MINUTES &
                                    ,, SECONDARY 7 5 X 7.5 MINUTES
WINDOW,MINUTES,15,15  ,, EXTENDS FROM ORIGIN 15 MINUTES NORTH & WEST
ORIGIN,DEG,30.00,97·00 ,,,HEADING,2,SMITHVILLE 15' QUAD ,,,MAP
ORIGIN,DEG,30 00,97·15 ,,,HEADING,2,BASTROP 15' QUAD ,,,MAP
ORIGIN,DEG,30.00,97 30 ,,,HEADING,2,MONTOPOLIS 15' QUAD ,,,MAP
ORIGIN,DEG,30.00,97·45 ,,,HEADING,2,BUDA 15' QUAD ,,,MAP
ORIGIN,DEG,30.15,97·00 ,,,HEADING,2,LEXINGTON 15' QUAD ,,,MAP
ORIGIN,DEG,30:15,97.15 ,,,HEADING,2,ELGIN 15' QUAD ,,,MAP
ORIGIN,DEG,30.15,97 30 ,,,HEADING,2,PFLUGERVILLE 15' QUAD ,,,MAP
ORIGIN,DEG,30·15,97:45 ,,,HEADING,2,LAKE TRAVIS 15' QUAD ,,,MAP
WINDOW,MIN,30,60 ,,,ORIG,DEG,30,97 ,, UNION OF PREVIOUS 8 WINDOWS
HEADING,2, 15' QUAD ,,,MAP,8       ,, EASY WAY TO GENERATE SAME 8 MAPS
SCALE,1/125000 ,,,HEADING,2,AUSTIN TX VICINITY ,,,MAP
EXIT
@FIN
```

1 7602

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1 7602

STATUS SAMPLE RUN

```
@RUN RJT17S,9999-DAM-P,TF5-N12345      . DEMAND TERMINAL RUN
@USE DAM.,TF5-L76758*DAM.
@ASG,A DAM.
@ADD DAM.SETUP
@XQT STATUS   . NOTE NORMALLY EXECUTED ONLY IN DEMAND MODE
RJT17M        ,, RUNID OF RUN WHOSE SUMMARY STATUS & INDEX ARE DESIRED
148           ,, INDEX OF RUN WHOSE DETAILED STATUS IS DESIRED
//T17/        ,, SLASH (/) MATCHES WITH ANY CHARACTER
EXIT
@FIN
```

DAM PACKAGE APPENDIX E· SAMPLE RUNSTREAMS

1 7602

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DAM PACKAGE APPENDIX F: SAMPLE CONTROL NETWORKS

(7605)

DAM PACKAGE APPENDIX F: SAMPLE CONTROL NETWORKS

1 7602

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DAM PACKAGE APPENDIX F: SAMPLE CONTROL NETWORKS

```
*CONTROL NET FOR ERTS SCENE 1037-16244 (29 AUG 72)
SCENE,1037-16244,3240
ATTITUDE,+0 12,-0 73
1, SCAN,47,505, DEG,31 1593,95 7352,  AUSTONIO 7.5'--BEND IN TRINITY R
28, SCAN,523,46, DEG,30 8635,96 0969,  IOLA 7.5'--SOUTH ZULCH RESERVOIR
43, SCAN,1194,692, DEG,30 3316,95 854,  PLANTERSVILLE 7 5'--L. BY ROSE HILL
87, SCAN,1942,42, DEG,29 8625,96 3777,  BERNARDO 7 5'--LAKE
17, SCAN,757,1397, DEG,30 5747,95 3532,  MAYNARD 7 5'--PURSLEY LAKE
32, SCAN,1405,1168, DEG,30 1397,95 6185,  OKLAHOMA 7 5'--NEIDIGK LAKE
82, SCAN,1673,874, DEG,29 978,95 8429,  BROOKSHIRE 15'--WARREN LAKE
87, SCAN,2178,1136, DEG,29 5986,95 7905,  RICHMOND 15'--BRAZOS RIVER
14, SCAN,671,1908, DEG,30.588,95 0358,  CAMILLA 7 5'--BEND IN TRINITY R
49, SCAN,1863,1844, DEG,29 7545,95 3152,  SETTGAST 7 5'--BUFFALO BAYOU
70, SCAN,1826,2259, DEG,29 7413,95 0669,  LA PORTE 7 5'--SHIP CHANNEL
78, SCAN,2071,2335, DEG,29 5621,95 0735,  LEAGUE CITY 7 5'--MUD LAKE
79, SCAN,2010,2360, DEG,29 6025,95 046,  LEAGUE CITY 7 5'--TAYLOR BAYOU
10, SCAN,200,3215, DEG,30 7959,94 1798,  CURTIS 15'--DAM B RESERVOIR
16, SCAN,395,2923, DEG,30 6859,94 3882,  WARREN 15'--MASTERSON LAKE
23, SCAN,1389,2542, DEG,30.022,94 814,  LIBERTY 15'--DUNCAN LAKE
66, SCAN,1844,3214, DEG,29.639,94 5248,  OYSTER BAYOU 7 5'--RESERVOIR
87, SCAN,2263,2931, DEG,29 3713,94.7709,  GALVESTON 7 5'--HORSESHOE LAKE
*ENTER ADJUST OR DIAGRAM
```

DAM PACKAGE APPENDIX F: SAMPLE CONTROL NETWORKS

```
*UTM CONTROL NET FOR ERTS SCENE 1037-16244 (29 AUG 72)
SCENE,1037-16244,3240
ATTITUDE,+0.12,-0.73
ZONE,14,,UTM ZONE FOR THE FOLLOWING 2 POINTS ONLY
28, SCAN,523,46, KM,777 60,3417.90,  IOLA 7 5'--SOUTH ZULCH RESERVOIR
87, SCAN,1942,42, KM,753.31,3306.26,  BERNARDO 7.5'--LAKE
ZONE,15,,UTM ZONE FOR ALL THE REMAINING POINTS IN THE NET
1, SCAN,47,505, KM,239.26,3450 29,  AUSTONIO 7.5'--BEND IN TRINITY R
43, SCAN,1194,692, KM,225 60,3358.80,  PLANTERSVILLE 7.5'--L. BY ROSE HILL
17, SCAN,757,1397, KM,274 32,3384.64,  MAYNARD 7 5'--PURSLEY LAKE
32, SCAN,1405,1168, KM,247 76,3336 98,  OKLAHOMA 7.5'--NEIDIGK LAKE
82, SCAN,1673,874, KM,225.69,3319 57,  BROOKSHIRE 15'--WARREN LAKE
87, SCAN,2178,1136, KM,229 73,3277.38,  RICHMOND 15'--BRAZOS RIVER
14, SCAN,671,1908, KM,304 80,3385 53,  CAMILLA 7 5'--BEND IN TRINITY R.
49, SCAN,1863,1844, KM,276.12,3293 65,  SETTGAST 7 5'--BUFFALO BAYOU
70, SCAN,1826,2259, KM,300.11,3291 73,  LA PORTE 7.5'--SHIP CHANNEL
78, SCAN,2071,2335, KM,299 12,3271.88,  LEAGUE CITY 7.5'--MUD LAKE
79, SCAN,2010,2360, KM,301 86,3276 31,  LEAGUE CITY 7 5'--TAYLOR BAYOU
10, SCAN,200,3215, KM,387.12,3407 39,  CURTIS 15'--DAM B RESERVOIR
16, SCAN,395,2923, KM,367 03,3395.43,  WARREN 15'--MASTERSON LAKE
23, SCAN,1389,2542, KM,325 06,3322 43,  LIBERTY 15'--DUNCAN LAKE
66, SCAN,1844,3214, KM,352 40,3279 58,  OYSTER BAYOU 7.5'--RESERVOIR
87, SCAN,2263,2931, KM,328 12,3250 25,  GALVESTON 7 5'--HORSESHOE LAKE
*ENTER ADJUST OR DIAGRAM
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DAM PACKAGE APPENDIX F: SAMPLE CONTROL NETWORKS

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*CONTROL NETWORK FOR ERTS SCENE 1073-16244, STRIP 3 (4 OCT 72)
SCENE,1073-16244,3240
ATTITUDE,+0.27,-0.55
1, SCAN,741,1788, DEG,30 5873,95.0359
2, SCAN,1445,1837, DEG,30 0883,95.1497
3, SCAN,1546,1678, DEG,30.0321,95.2631
4, SCAN,1901,1927, DEG,29.7594,95 1886
5, SCAN,2153,2291, DEG,29 548,95 027
6, SCAN,1092,2319, DEG,30 2903,94.7945
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*CONTROL NET FOR ERTS SCENE 1092-16305 (23 OCT 72)
SCENE,1092-16305,3240
ATTITUDE,+0.04,-0.52
*LATITUDE SHOULD BE 30.5819 FOR PT -6 AND 30.1644 FOR PT -9
1, SCAN,2243,516, DEG,29 4956,97.624,  COST SPILLWAY
5, SCAN,1315,502, DEG,30 1506,97.4534,  BASTROP·RIVER BEND
-6, SCAN,646,947, DEG,32 5819,97.059,  ALCOA LAKE·LARGE LAKE
7, SCAN,1441,896, DEG,30.0263,97 2457,  SMITHVILLE:RIVER BEND
8, SCAN,480,1345, DEG,30 6625,96.7892,  MILANO:SMALL LAKE
-9, SCAN,1163,1509, DEG,37 1644,96 8276,  LEDBETTER.SMALL POND
10, SCAN,1447,1464, DEG,29.9684,96 9102,  LA GRANGE W.RIVER BEND
11, SCAN,1603,1710, DEG,29.8355,96 7956,  AMMANSVILLE·RIVER BEND
14, SCAN,1094,2052, DEG,30 1617,96 4921,  BRENHAM.SMALL LAKE
16, SCAN,44,2724, DEG,30.8374,95 8827,  BEDIAS·LAKE DONNA V
19, SCAN,1851,2567, DEG,29.5795,96 342,  EAGLE LAKE EAGLE LAKE
*ENTER ADJUST OR DIAGRAM
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DAM PACKAGE APPENDIX F: SAMPLE CONTROL NETWORKS

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*CONTROL NET FOR ERTS SCENE 1092-16305, STRIP 3 (23 OCT 72)
SCENE,1092-16305,3240
ATTITUDE,+0.04,-0.52
1, SCAN,1089,2050, DEG,30 16549,96 49212
2, SCAN,900,1930, DEG,30 30955,96 52526
3, SCAN,865,1878, DEG,30 34021,96 54903
4, SCAN,822,2066, DEG,30 35153,96 42894
5, SCAN,1717,2201, DEG,29 7085,96 53002
6, SCAN,1755,2225, DEG,29 68024,96.52379
7, SCAN,1769,2265, DEG,29 66579,96 50390
8, SCAN,668,2245, DEG,30 44251,96.29373
9, SCAN,735,2248, DEG,30.39592,96 30438
10, SCAN,1720,2249, DEG,29 70148,96 50208
11, SCAN,1999,2078, DEG,29 52066,96 65836
12, SCAN,2007,1958, DEG,29.52777,96 73030
13, SCAN,1720,2192, DEG,29.70681,96 53615
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*CONTROL NET FOR ERTS SCENE 1132-16512 (02 DEC 72)
SCENE,1132-16512,3240
ATTITUDE,+0.05,-0 37
-1, SCAN,597,685, DEG,40 7083,99 8725
4, SCAN,505,368, DEG,40.792,100.0671
5, SCAN,519,383, DEG,40.7806,100 0605
29, SCAN,1888,217, DEG,39.8428,100.4873
2, SCAN,561,965, DEG,40 6913,99.6817
-11, SCAN,88,981, DEG,40.2617,99.8084
3, SCAN,321,2240, DEG,40 7223,98 7667
14, SCAN,173,2640, DEG,40 781,98.4626
40, SCAN,137,2729, DEG,40.7964,98.3946
38, SCAN,243,2442, DEG,40 7544,98.6124
41, SCAN,1925,3057,' DEG,39 5239,98.6264
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DAM PACKAGE APPENDIX F: SAMPLE CONTROL NETWORKS

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*CONTROL NET FOR ERTS SCENE 1191-15381
SCENE,1191-15381,3240
ATTITUDE,+0.15,-0 51
1, SCAN,149,648, DEG,35 421,82 925
7, SCAN,1180,60, DEG,34 752,83.503
10, SCAN,2237,26, DEG,34 0116,83.743
*14, SCAN,574,1205, DEG,35 0600,82.6756,,  (REMARK CARD)
,,17, SCAN,1564,1312, DEG,34.3556,82.821,,  (BLANK CARD -- IGNORED)
23, SCAN,382,2196, DEG,35.108,82.0156
31, SCAN,1313,2232, DEG,34 4544,82 1984
30, SCAN,2126,1926, DEG,33 9138,82 5638
33, SCAN,525,3150, DEG,34.9142,81.469
37, SCAN,2264,3192, DEG,33.692,81 829
*LAT/LON FOR THIS NET MEASURED FROM 1:250000 SCALE MAPS
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*CONTROL NET FOR ERTS SCENE 1265-15494 (04 APR 73)
SCENE,1265-15494,3240
ATTITUDE,+0 11,-0.69
13, SCAN,852,507, DEG,36.4949,85 7770
11, SCAN,915,421, DEG,36.4604,85 8445
12, SCAN,2303,237, DEG,35 5008,86 2533
17, SCAN,1262,1473, DEG,36 1121,85.2556
16, SCAN,2268,2626, DEG,35 2866,84 7559
2, SCAN,638,3030, DEG,36.389,84 1390
3, SCAN,769,2962, DEG,36.3044,84 2113
4, SCAN,1343,1916, DEG,36 0103,84.9946
5, SCAN,1512,1810, DEG,35 9024,85 0974
15, SCAN,2275,471, DEG,35.4978,86 1019
1, SCAN,2141,2975, DEG,35 3402,84 5140
6, SCAN,1293,1187, DEG,36 1185,85 4437
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*CONTROL NET FOR ERTS SCENE 1285-16010 (04 MAY 73)
SCENE,1285-16010,3240
ATTITUDE,-0 02,-0.76
1, SCAN,760,147, DEG,36.6129,88.85755
2, SCAN,890,159, DEG,36.5212,88.8775
3, SCAN,2049,17, DEG,35.7283,89.21155
5, SCAN,1866,324, DEG,35 8273,88 9829
6, SCAN,1060,1026, DEG,36.3183,88 3714
7, SCAN,1386,960, DEG,36.0986,88.4836
8, SCAN,1658,1420, DEG,35 864,88.2557
9, SCAN,1525,2093, DEG,35 8892,87 8056
10, SCAN,619,2232, DEG,36 502,87 51635
13, SCAN,2272,3095, DEG,35 2667,87 3583
14, SCAN,2059,2773, DEG,35.4479,87 5069
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DAM PACKAGE APPENDIX F: SAMPLE CONTROL NETWORKS

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*CONTROL NET FOR ERTS SCENE 1289-16261 (08MAY73)
SCENE,1289-16261,3240
ATTITUDE,+0.00,-0 72
2, SCAN,492,92, DEG,29.5241,96 6632,  SAWMILL BR
3, SCAN,544,637, DEG,29 4384,96.3593,  BONUS
4, SCAN,797,392, DEG,29.2821,96 5495,  SHERIDAN SE
-9, SCAN,2063,46, DEG,28 4239,96.9894,  TIVOLI
8, SCAN,1841,188, DEG,28 5663,96 8674,  GREEN LAKE
26, SCAN,1612,1028, DEG,28.652,96.3408,  TURTLE BAY
-11, SCAN,1974,910, DEG,28 4095,96 4793,  PORT OCONNER
-30, SCAN,1877,922, DEG,28 4762,96 4533,  PORT OCONNER
-7, SCAN,1365,1500, DEG,28.782,96.0240,  BLESSING SE
17, SCAN,267,2043, DEG,29 5028,95.4873,  ALMEDA
18, SCAN,390,2074, DEG,29.4133,95 4935,  JULIFF
-19, SCAN,1019,2196, DEG,28.9623,95 5494,  CEDAR LANE NE
13, SCAN,1501,1639, DEG,28 673,95 9660,  MATAGORDA
-24, SCAN,95,2792, DEG,29 5527,95.0240,  LEAGUE CITY
22, SCAN,470,2880, DEG,29.280,95 0469,  HITCHCOCK
21, SCAN,987,2606, DEG,28 9432,95.3073,  FREEPORT
20, SCAN,1069,2500, DEG,28 896,95 3840,  JONES CREEK
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DAM PACKAGE APPENDIX F: SAMPLE CONTROL NETWORKS

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*CONTROL NET FOR ERTS SCENE 1302-15551 (21 MAY 73)
SCENE,1302-15551,3240
ATTITUDE,-0.23,-0 63
1, SCAN,2220,987, DEG,35 50133,87 1884
4, SCAN,2248,2765, DEG,35 3022,86.0992
6, SCAN,512,3228, DEG,36.4703,85 4183
7, SCAN,785,1011, DEG,36 5063,86.8594
5, SCAN,425,3159, DEG,36.5374,85 4397
9, SCAN,1524,1306, DEG,35 9584,86 8370
10, SCAN,1379,1303, DEG,36 0609,86 8079
12, SCAN,1164,1757, DEG,36.166,86 4760
13, SCAN,1604,2086, DEG,35 8237,86.3712
41, SCAN,2253,2770, DEG,35 298,86.0972
15, SCAN,1943,2780, DEG,35 5141,86.0207
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DAM PACKAGE APPENDIX F: SAMPLE CONTROL NETWORKS

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*CONTROL NETWORK FOR ERTS SCENE 1407-15361 (03 SEP 73)
SCENE,1407-15361,3240
ATTITUDE,+0.20,-0 88
1, SCAN,64,272, DEG,38 4143,82.3887
2, SCAN,334,26, DEG,38 247,82 6045
3, SCAN,1053,78, DEG,37.7361,82 7283
4, SCAN,70,1138, DEG,38.3226,81 8309
6, SCAN,1208,1512, DEG,37.4833,81.8466
7, SCAN,151,2146, DEG,38 1621,81 1950
8, SCAN,69,2272, DEG,38.2067,81 0951
10, SCAN,695,2167, DEG,37 7773,81 3095
11, SCAN,1131,3007, DEG,37.3833,80 8789
12, SCAN,1181,3138, DEG,37.3351,80.8094
13, SCAN,1155,3183, DEG,37.3484,80.7758
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*CONTROL NET FOR ERTS SCENE 1420-18303 (16 SEP 73)
* SCENE 1420-18303 NORTH REELS 1-4
SCENE,1420-18303,3240
ATTITUDE,-0 03,-0.70
1, SCAN,1160,125, DEG,48 9713,123 0828
2, SCAN,1087,571, DEG,48.9719,122.7212
3, SCAN,1143,199, DEG,48 9761,123 0213
4, SCAN,1504,610, DEG,48 6789,122 8147
5, SCAN,1769,303, DEG,48 531,123.1231
6, SCAN,1712,339, DEG,48.5667,123.0805
9, SCAN,2275,785, DEG,48.1261,122.9076
10, SCAN,2282,476, DEG,48 1568,123 1423
11, SCAN,1148,829, DEG,48 8992,122 5425
12, SCAN,930,1361, DEG,48.9867,122.0692
14, SCAN,1456,1215, DEG,48.641,122 3394
15, SCAN,1722,1320, DEG,48.4449,122.3400
19, SCAN,2157,1591, DEG,48.1127,122.2649
20, SCAN,2253,895, DEG,48.1285,122.8191
21, SCAN,821,2308, DEG,48.9444,121.3112
22, SCAN,927,1661, DEG,48.9517,121.8394
25, SCAN,1526,2159, DEG,48.4778,121 6452
27, SCAN,2108,2242, DEG,48.0671,121.7613
28, SCAN,2163,2346, DEG,48.017,121 7008
29, SCAN,2177,1647, DEG,48 092,122.2284
32, SCAN,752,2650, DEG,48.9488,121.0301
-33, SCAN,778,3084, DEG,48.8819,120 7112
34, SCAN,2256,3151, DEG,47.8533,121.1352
35, SCAN,1539,2855, DEG,48.3825,121.1286
36, SCAN,2100,2535, DEG,48.0363,121.5410
38, SCAN,2219,3118, DEG,47 8819,121.1488
40, SCAN,2280,3220, DEG,47.8283,121.0935
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*CONTROL NET FOR ERTS SCENE 1420-18305 (16 SEP 73)
* SCENE 1420-18305 SOUTH. REELS 1-4
SCENE,1420-18305,3240
ATTITUDE,-0.03,-0 72
1, SCAN,458,172, DEG,48 0417,123 4297
3, SCAN,1246,132, DEG,47 4986,123 6786
-4, SCAN,1383,290, DEG,47 3858,123.6043
-5, SCAN,1527,717, DEG,47 2367,123.2728
6, SCAN,1640,753, DEG,47.1533,123 3311
7, SCAN,242,475, DEG,48 1568,123.1423
8, SCAN,253,743, DEG,48.1189,122 9447
9, SCAN,346,162, DEG,48 1209,123.4061
-10, SCAN,1907,652, DEG,46 9788,123 4890
11, SCAN,213,895, DEG,48.1285,122 8191
12, SCAN,117,1591, DEG,48 1127,122.2649
-15, SCAN,1024,1285, DEG,47.5222,122.7620
16, SCAN,918,1244, DEG,47.6001,122 7600
-17, SCAN,1616,859, DEG,47 1605,123 2487
18, SCAN,1829,1537, DEG,46 9306,122 8057
20, SCAN,2145,1433, DEG,46.7233,122 9727
21, SCAN,137,1647, DEG,48 092,122.2284
24, SCAN,68,2242, DEG,48.0671,121.7613
25, SCAN,1052,1925, DEG,47 4252,122 2917
26, SCAN,1700,1689, DEG,47 0039,122 6568
29, SCAN,1895,2240, DEG,46.801,122.3094
31, SCAN,60,2535, DEG,48.0363,121 5410
33, SCAN,179,3119, DEG,47.8819,121 1488
35, SCAN,1138,2647, DEG,47 2781,121.7858
36, SCAN,240,3220, DEG,47 8283,121 0935
37, SCAN,1958,2468, DEG,46 7307,122.1604
-39, SCAN,2067,3147, DEG,46 5768,121 7046
40, SCAN,2159,3001, DEG,46.5263,121 8355
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*CONTROL NET FOR ERTS SCENE 1704-16231 (27JUN74)
SCENE,1704-16231,3240
ATTITUDE,+.10,-0 83
27, SCAN,1418,54, DEG,30 3455,97 7972,  AUSTIN WEST
-28, SCAN,1550,581, DEG,30 2051,97.5173,  WEBERVILLE
29, SCAN,2072,285, DEG,29 866,97.7917,  MARTINDALE
30, SCAN,1987,423, DEG,29.9131,97.6960,  LOCKHART NORTH
53, SCAN,161,231, DEG,31 2123,97.4462,  CHSTRIP1
54, SCAN,276,132, DEG,31 140,97.5265,  BLAND
55, SCAN,546,175, DEG,30 9469,97.5555,  CHKSTRP2
31, SCAN,426,1598, DEG,30 8987,96 6964,  CALVERT
32, SCAN,955,1141, DEG,30.5709,97.0728,  ALCOA LAKE
52, SCAN,522,1406, DEG,30.8494,96.8287,  CALIB PT
-33, SCAN,1787,1436, DEG,29 9597,97 0685,  WEST POINT
20, SCAN,2045,2324, DEG,29 6944,96 6030,  COLUMBUS
50, SCAN,770,2056, DEG,30.6142,96.4983,  CALIB PT
-51, SCAN,780,2079, DEG,30.6033,96.4847,  CALIB PT
-21, SCAN,1166,2110, DEG,30.3308,96 5486,  SOMERVILLE
22, SCAN,1257,2094, DEG,30.2687,96 5757,  SOMERVILLE
23, SCAN,807,2293, DEG,30 5648,96 3675,  WELLBORN
24, SCAN,835,2317, DEG,30 5434,96 3595,  WELLBORN
-34, SCAN,158,2107, DEG,31 0369,96 3426,  CAMP CREEK LAKE
-25, SCAN,2228,2673, DEG,29 5347,96 4407,  ALTAIR
40, SCAN,325,2960, DEG,30 8373,95 8808,  BEDIAS
26, SCAN,2110,2672, DEG,29.6161,96.4169,  ALTAIR
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DAM PACKAGE APPENDIX G: SAMPLE SPECTRAL LIMITS

(7605)

DAM PACKAGE APPENDIX G: SAMPLE SPECTRAL LIMITS

1 7602

(THIS PAGE RESERVED FOR FUTURE USE)

DAM PACKAGE APPENDIX G: SAMPLE SPECTRAL LIMITS

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NAME,WATER (CH4/CH1)
*ORIGINAL 2-CHANNEL SPECTRAL LIMITS MODIFIED FOR LONG NARROW WATER BODIES
CHAN,  4,     1
RAD, 00,00, 09,63
RAD, 01,01, 12,63
RAD, 02,02, 14,63
RAD, 03,03, 17,63
RAD, 04,04, 20,63
RAD, 05,05, 23,63
RAD, 06,06, 25,63
RAD, 07,07, 28,63
RAD, 08,08, 31,63
RAD, 09,09, 33,63
RAD, 10,10, 36,63
RAD, 11,11, 40,63
RAD, 12,12, 43,63
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NAME,WATER (CH4/CH1) ANDERSON
*ORIGINAL TWO-CHANNEL SPECTRAL LIMITS FOR WATER BY A C. ANDERSON
****    IF(CH1.GT.(8.5+2.826*CH4)) MATERIAL = WATER    ****
CHAN,  4,      1
RAD, 00,00, 09,63
RAD, 01,01, 12,63
RAD, 02,02, 15,63
RAD, 03,03, 17,63
RAD, 04,04, 20,63
RAD, 05,05, 23,63
RAD, 06,06, 26,63
RAD, 07,07, 29,63
RAD, 08,08, 32,63
RAD, 09,09, 34,63
RAD, 10,10, 37,63
RAD, 11,11, 40,63
RAD, 12,12, 43,63
RAD, 13,13, 46,63
RAD, 14,14, 49,63
RAD, 15,15, 51,63
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